

BUSINESS WEEK

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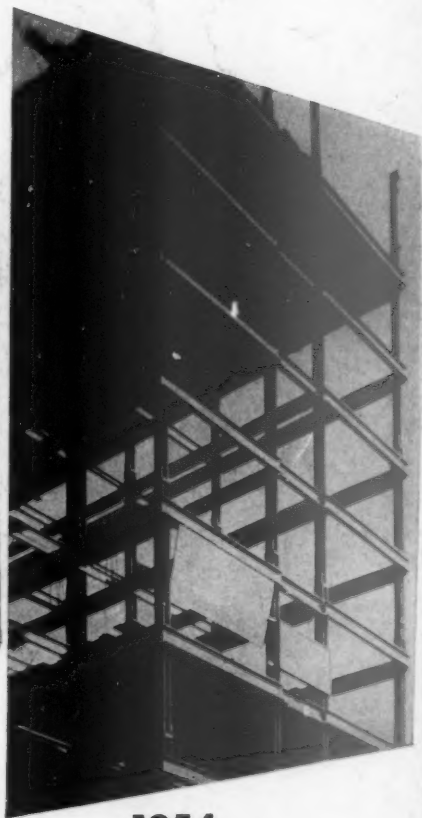
The **25** years that remade America



**1929
DEPRESSION**



**1941
WAR**



**1954
BOOM**

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SPECIAL REPORT PAGE 75

A MCGRAW-HILL PUBLICATION

SEPT. 4, 1954

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...but don't go near the

DIELDRIN

LIFE is no longer a picnic for the *Culicidae* family. A new insecticide, *Dieldrin*, is now approved for mosquito control—as well as against those companion health threats, houseflies, gnats, ants.

Just *one ounce* of Dieldrin is enough to kill every mosquito on 2500 square feet of breeding grounds or marshland. And the killing power stays there for weeks . . . for months, if the treated area

is protected from wind and rain like a barn or shed interior.

Remember the name, Dieldrin (say "deed-drin"). It's making international friends by reducing human misery and making waste lands habitable. Public health officials are now using it in many communities.



Shell Chemical Corporation

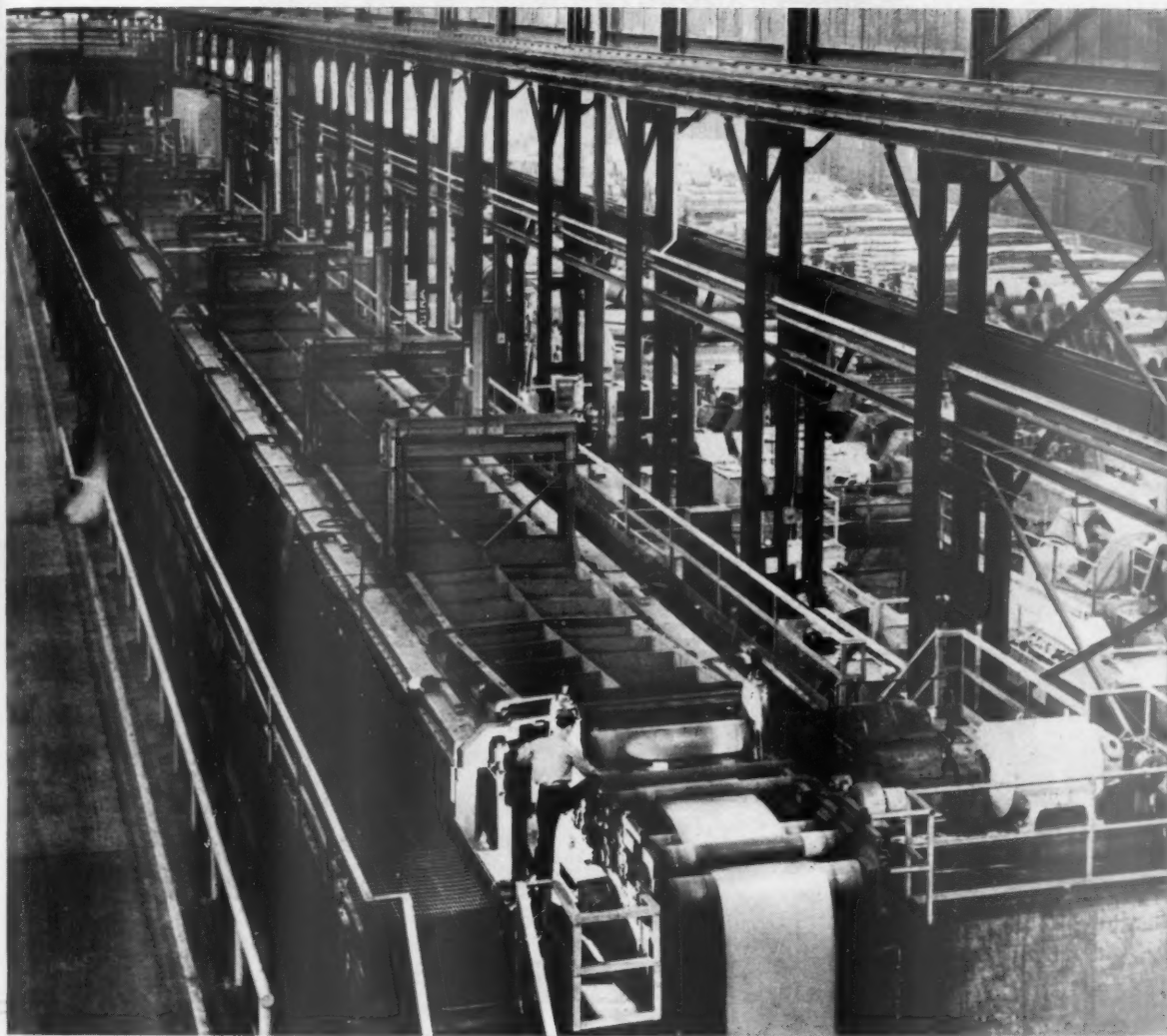
Chemical Partner of Industry and Agriculture

NEW YORK • DENVER

RESEARCH KEEPS

B.F. Goodrich

FIRST IN RUBBER



Steel swims in a river of hot acid

A typical example of B. F. Goodrich improvement in rubber

Rushing through that tank of hot acid is a long ribbon of steel on its way to being shaped into automobile bodies. The acid bath removes every speck of rust and scale.

This job used to be done in tanks made of brick and concrete, but they would crack from the heat. Engineers believed rubber linings would be so easily damaged the acid would go through. A satisfactory tank seemed impossible until B. F. Goodrich came up with something entirely new in the way of rubber lining.

They worked out a combination

lining of hard rubber and soft rubber, called Triflex, that's protected by brick. They made the hard rubber layer in sections that overlap so the lining could expand and contract with heating and cooling, and so never break away from the steel tank.

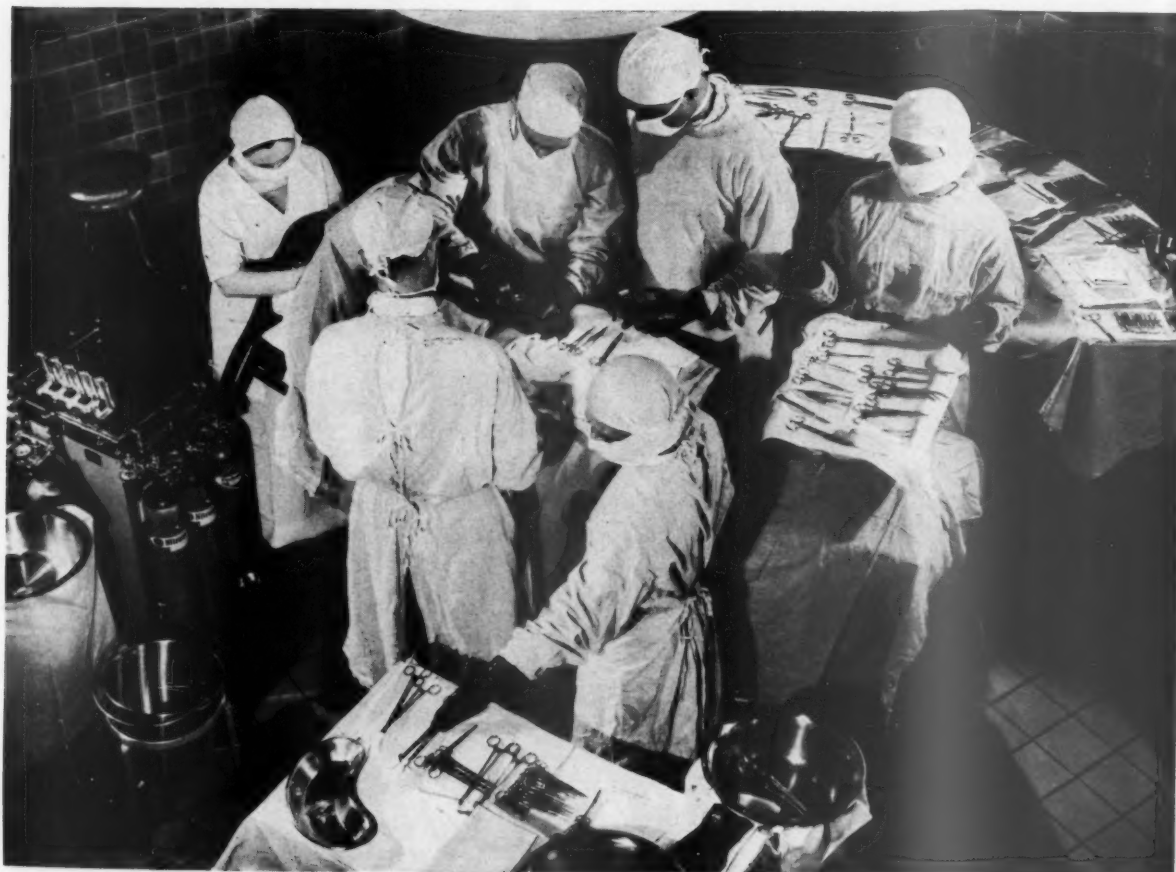
Acid leaks stopped wherever the B. F. Goodrich lining was used. Costly shutdowns for tank repairs were a thing of the past.

Developing the first really practical lining for steel tanks is typical of the work that is constantly going on at B. F. Goodrich. Because every prod-

uct B. F. Goodrich makes is constantly being studied to see how it can be improved from the user's standpoint, how it can be made to last longer and do a better job. Make sure you take advantage of these improvements by calling in your BFG distributor next time you need belting, hose or any one of the thousands of industrial products B. F. Goodrich makes. *The B. F. Goodrich Company, Dept. M-311, Akron 18, Ohio.*

B.F. Goodrich
INDUSTRIAL PRODUCTS
DIVISION

WHAT  VANCORAM  PRODUCTS  MEAN  TO  YOU 



I'm not afraid...

It's good to know that if you need it, modern surgery can work miracles for you.

Yes, we owe much to medicine's progress—particularly to our dedicated surgeons—whose healing skills have hushed old fears and given new life and hope to today's sick.

Much of the dramatic work done in surgery and post-operative care has been made possible through the use of new surgical instruments and sterile hospital equipment made from alloy steels containing Vancoram ferrochromium. Stainless steels and other chromium-bearing metals, for example, are used in countless applications throughout the hospital: in instrument stands and trays, basins, tables, sterilizers, light-shades and mountings; in retractors, clamps, scissors and forceps

—where the inherent cleanliness of stainless steel and its resistance to the corrosive action of chemicals and antiseptics are so important.

Stainless steels also guard our health in the processing and storage of medicine, chemicals and food. And there are special steels with built-in alloy muscle to make our planes and tanks more formidable ... to guard us in another way.

How VCA Helps You . . . Vanadium Corporation of America develops and produces ferro alloys of Vanadium, chromium, manganese, silicon, titanium and boron—to help America's steel-makers give you finer alloys for every application in industry. VCA is also a major producer of uranium for atomic energy and master alloys for the aluminum industry.



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BUSINESS WEEK • Sept. 4, 1954

AIR-MAZING FACTS

BY O. SOGLOW



SCIENCE DISCOVERS TIDES IN ATMOSPHERE!
 Isaac Newton suspected there were tides in the atmosphere—modern science proved it! By intricate measurements, scientists have succeeded in establishing that there are tides in the atmosphere that rise and fall due to the pull of the moon just like the tides in the sea.



DROWNS NOISY AIR! Air rushing through engine and compressor intakes often sets up a racket that makes employees jittery, annoys neighbors. Keep 'em happy by using Air-Maze filter silencers. They muffle the noise as well as filter the air.



GOBBLES UP GREASE! Air-Maze Greastop filters snatch airborne grease, dirt and dust from the air—prevent fire hazards in kitchen exhaust ducts.

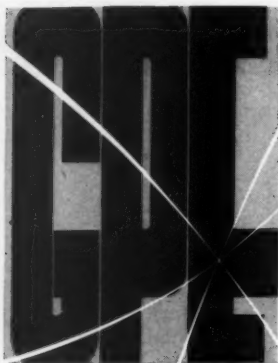
IF YOU BUILD OR USE engines, compressors, air-conditioning and ventilating equipment, or any device using air or liquids—the chances are there is an Air-Maze filter engineered to serve you better. Representatives in all principal cities. For condensed product catalog, write Air-Maze Corporation, Dept. C, 25000 Miles Rd., Cleveland 28, Ohio.

AIR-MAZE

The Filter Engineers

AIR FILTERS
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 SPARK ARRESTERS

LIQUID FILTERS
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SERVES INDUSTRY

THROUGH *coordinated*

The producing companies of General Precision Equipment Corporation are engaged in the development, production and sale of advanced technological products. These products all have a broad common base: 1) they represent precision equipment in some form; 2) they derive from similar fields of technical competence; 3) they save labor, increase productivity, or achieve results which cannot be attained with even limited use of on-the-spot manpower.

A general view of the technical capacities of the GPE Producing Companies is given in the chart. But the chart cannot show the very close interrelation of these capacities nor the highly flexible application of facilities, techniques and capabilities which exists among these companies. This is achieved through GPE's basic operating policy—Coordinated Precision Technology.

GPE Coordinated Precision Technology operates in all areas—in research, development and manufacture. The record of the GPE Producing Companies in solving advanced technological problems and meeting the demand for high speed, precision, reliability, light weight and compactness at competitive prices is the result of this coordination, the constant application of the newest and most highly advanced techniques, and unremitting insistence on highest quality.

Perhaps the most conspicuous advantage of GPE Coordinated Precision Technology is that the concept and development of equipment and systems, and of solutions to the underlying technical problems, are not restricted by being confined to the specialized techniques of a particular field. In short, GPE Coordinated Precision Technology permits each company to seek the optimum solution for the customer by the application of all relevant techniques within the total capacities of the entire group. Address inquiries to:

GENERAL PRECISION EQUIPMENT CORPORATION

92 GOLD STREET, NEW YORK 38, NEW YORK



Over **2200** scientists, engineers, draftsmen, testers and other technical personnel in the GPE Companies work in the fields covered by this chart.

**CAPACITIES OF THE
GPE PRODUCING COMPANIES**

PRECISION MECHANICS
and CERAMICS

ELECTRICAL EQUIPMENT
and COMPONENTS

ELECTRONICS

HYDRAULICS
and LIQUIDS HANDLING

PROFESSIONAL and INDUSTRIAL
TELEVISION EQUIPMENT

INSTRUMENTATION

SERVOs and CONTROLS

AUTOMATIC COMPUTERS
and COMPONENTS

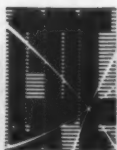
ULTRASONICS

RADAR and MICROWAVE

MOTION PICTURE
and SOUND EQUIPMENT

OPTICAL DEVICES

THE



PRODUCING COMPANIES

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GENERAL PRECISION LABORATORY
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THE HERTNER ELECTRIC
COMPANY—CLEVELAND

KEARFOTT COMPANY, INC.
LITTLE FALLS, N. J.

One of a series telling
how the producing companies of
General Precision Equipment Corporation
are contributing to America's progress.

precision technology

	<i>Simplex</i>	<i>Poorless</i>			<i>Kearfott</i>			<i>Strong</i>	<i>ASKANIA</i> REGULATOR COMPANY		
MECHANICAL DEVICES	□□□	□	□□□	□□	□□□	□□□	□□□	□□	□□□	□□	□□□
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TELEVISION DEVICES	□□	□□	□□□		□□□	□□	□□□	□□□			

- Manufacturing
- Manufacturing and product development
- Manufacturing, product development and research
- Pilot manufacturing, product development and research

Westinghouse Announces Another New

NEW TRAFFIC SENTINEL



ew
EL

Development for Automatic Elevators

CUTS WAITING TIME

Invisible Ray Controls Door Closing... System Retains All Safety Features

Now Westinghouse presents another milestone in modern, operatorless, heavy-traffic elevating—*New Westinghouse Traffic Sentinel*. Combined with Westinghouse SAF-T-EDGE Doors (which assure complete protection) this intriguing new device speeds overall round trip time . . . eliminates unnecessary delays at intermediate floor stops. It vastly improves Operatorless Selectomatic service—the system that cuts operating costs up to \$7,000 per car a year.

Here's how **TRAFFIC SENTINEL** works—

Normally, doors remain open for a predetermined time—regardless of how few people enter or leave the car. During light traffic periods, this door-open time is wasted. With new **TRAFFIC SENTINEL**, an invisible ray is broken by people entering or leaving the car. The ray automatically adjusts the door-open time according to the number of people moving in and out of cars at intermediate floors. The lighter the traffic, the shorter the door-open time. During heavier traffic, **Traffic Sentinel** holds the doors open long enough to permit loading or unloading of the car. At the lobby, it allows ample time for a fully loaded car to empty. It combines complete safety with minimum door-operating time. To find out more about this Westinghouse first, call our nearest office—we're listed in the Yellow Pages.

Westinghouse Elevators

PASSENGER AND FREIGHT ELEVATORS • ELECTRIC STAIRWAYS

PROTECTIVE MAINTENANCE AND SERVICE

Send for new booklet, "Westinghouse Traffic Sentinel"—a description of this completely new development that cuts wasted waiting time.

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9 Rockefeller Plaza, Dept. SP-3 New York City
Please send me your booklet
"Westinghouse Traffic Sentinel."

NAME AND TITLE

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YOU CAN BE SURE...IF IT'S **Westinghouse**

ASBESTOS PRODUCTS



Plant of the Natural Gas Storage Company of Illinois, Herscher, Illinois. Roofing and siding are "Century" Asbestos-Cement Corrugated. Contractor: Standard Asbestos Manufacturing & Insulating Company, Kansas City, Mo.

Lowered maintenance costs with "Century" Asbestos Corrugated

Maintenance costs are sharply decreased with the use of "Century" asbestos corrugated. This lifetime roofing and siding will serve for many years and never need protective paint.

Made of asbestos fiber and portland cement, "Century" asbestos corrugated is strong, dense and tough. It won't burn, rot or corrode. It can-

not be damaged by insects, weather and vermin.

Most important of all, "Century" asbestos corrugated is one of the most economical materials you can use.

For additional information on the savings possible from the use of this rugged, maintenance-free roofing and siding, write today for complete details.

Nature made asbestos . . . Keasbey & Mattison has made it serve mankind since 1873

KEASBEY & MATTISON COMPANY
AMBLER • PENNSYLVANIA
In Canada: Atlas Asbestos Co., Ltd. • Montreal, Toronto, Winnipeg, Vancouver



READERS REPORT

The Novelist's Insight

Dear Sir:

It was refreshing to read the editorial [BW—Aug. 14 '54, p144], emphasizing the contributions made by creative artists in the understanding of human beings. The author you quote, Nigel Balchin, is a good example of a writer who is interested in exploring human problems. However, any of your readers who would like to delve into his books would find themselves misled by the title, *My Own Executioner*; the correct title is *Mine Own Executioner*.

PAUL BUTLER

NEW ROCHELLE, N. Y.

Dear Sir:

In your Aug. 14 issue under the Trend section, you have an article on *The Novelist's Insight*. A brilliant study by Nigel Balchin is mentioned but its title is not given. I would like to get a copy. Can you tell me where one may be purchased?

I'm a businessman and believe as you do that too often we ignore the arts and the sciences in trying to learn how people tick.

J. RUSSELL HERITAGE

PITTSBURGH, PA.

• The study that Balchin wrote is titled *"The Worker in Modern Industry."* It was published by the Institute of Personnel Management in London, and can be obtained directly from them by writing Management House, Hill Street, London, W.1, England.

A Loss Is a Loss?

Dear Sir:

On page 32 in your issue of Aug. 14, a photograph of flames sweeping through American Distilling Co.'s Pekin (Ill.) plant refers in its caption to a \$47.2-million tax loss to the government.

Readers unfamiliar with the operation of the Federal excise tax on distilled spirits might be misled by this statement. This fire will not result in any actual loss in Federal revenue since this tax is not paid on whiskey stored in inventory, but on withdrawals for consumption. Consumer demand determines such revenue collections, not the amount of whiskey in warehouses. In spite of this huge loss, over-all industry inventories are ample to supply consumer demand.

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, 1954



TEAMWORK THAT PUTS THE HONK IN AUTO HORNS

Teams like this account for America's great productive strength. Here two people work together in assembling auto horns. The worker at the left uses a small Keller Pneumatic Screw Driver to start the screws which attach a preassembly of stacked parts to the yoke.

Then the part is passed to her co-worker, who uses a heavier type Keller Screw Driver to run down the screws

and tighten them. Together they assemble an average of 461 units an hour—about 77 a minute, or more than 1 a second.

Efficient production teams are more than just people working together. Most effective teams, like the one above, frequently consist of people and Keller Air Tools . . . because Keller Tools multiply their productivity many times, enabling them to pro-

duce faster and easier for more hours without fatigue.

Keller Air Tools build worker efficiency, and they have the added advantage of being applied by Keller trained application engineers who know how to secure optimum results in terms of bigger output and lower cost. Is the near-by Keller man working with your engineers to help solve your production problems?

KELLER TOOL COMPANY

1301 FULTON STREET

GRAND HAVEN, MICHIGAN



Air Mallets



Drills



Compression Riveters



Air Motors



Screw Drivers



Grinders



Nut Setters



Airfoodrills

Air Tools engineered to industry

INDUSTRY Lives by the

INCH

Crushtue Grinding is a good example of what may be achieved by challenging the conventional and adopting an entirely new approach.

Diamonds have been used to dress grinding wheels ever since the dawn of the industrial epoch. Then Sheffield engineers commercially introduced a new process to American Industry—a process by which the periphery of the wheel is quickly crushed to any desired profile by a formed steel roll. Thus the full form of the roll is transferred to the work part as it passes under the grinding wheel.

Intricate form and thread grinding have been put on a low-cost, high-production basis. Millions of dollars and countless hours of valuable time have been saved. Uniformity and precision of the end products have been greatly increased.

Without modern economical production equipment to assure interchangeability, both the mass production assembly line and today's replacement parts system would be impossible.

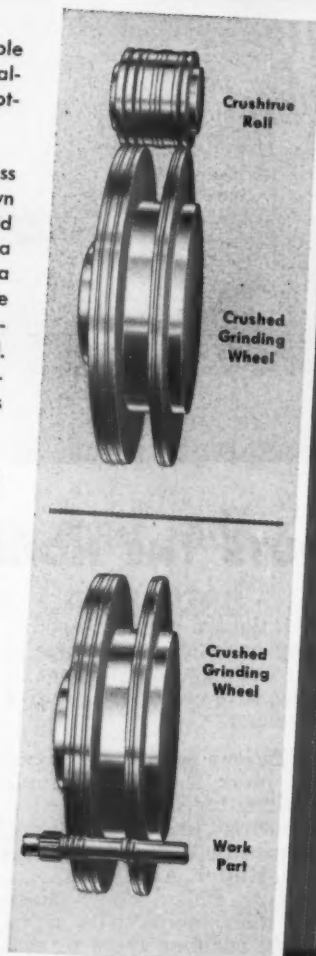
Industry lives by the inch.

Machine Tool Division,
The Sheffield Corporation,
Dayton 1, Ohio, U.S.A.

6913



SHEFFIELD



The gallonage lost in this fire can be translated into dollars accurately only on the basis of the revenue that would have been realized had it been withdrawn for consumption instead of lost. It may be interesting to note that in this connection the Federal revenue from distilled spirits excise tax amounted last year to \$1,958,064,911, which brought the total internal revenue from this source since 1934 to \$20,963,938,127.

THOMAS J. DONOVAN
VICE-PRESIDENT & EXECUTIVE
DIRECTOR
LICENSED BEVERAGE INDUSTRIES,
INC.
NEW YORK, N. Y.

• Technically, Reader Donovan is correct. But, as a practical matter, American Distilling was making the spirits for sale and not for perpetual inventory. So, whenever the stuff would be sold, the tax would be due and payable. Now, it's gone and there's no tax for Uncle Sam to collect on it.

Not the Original

Dear Sir:

We refer to the article appearing in the Aug. 14 edition of your magazine under the heading, "Prefabs: Newcomer's Fast Break." On page 80, you indicate that Aetna Securities Corp. handled the stock issue for National Homes Corp.

We were not the original underwriters of National Homes Corp. common stock. The firm of Kiser, Cohn and Shumaker, Indianapolis, Ind., handled the first public offering of these securities. Our firm began to publicize the stock in December, 1952, and subsequent to that date, in the terms of our industry, we made a secondary market in the stock of National Homes and traded a great deal of the stock.

IRA KRUPNICK

PRESIDENT
AETNA SECURITIES CORP.
NEW YORK, N. Y.

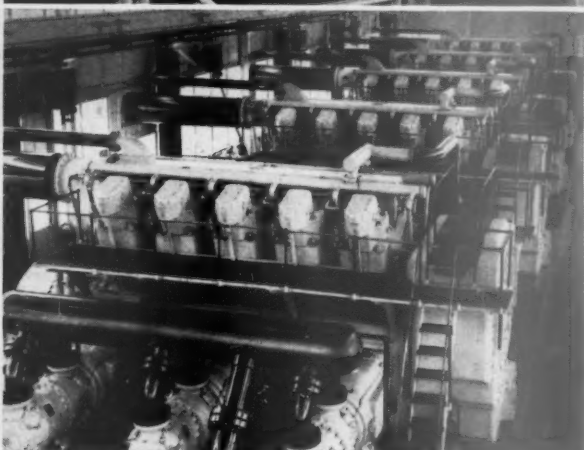
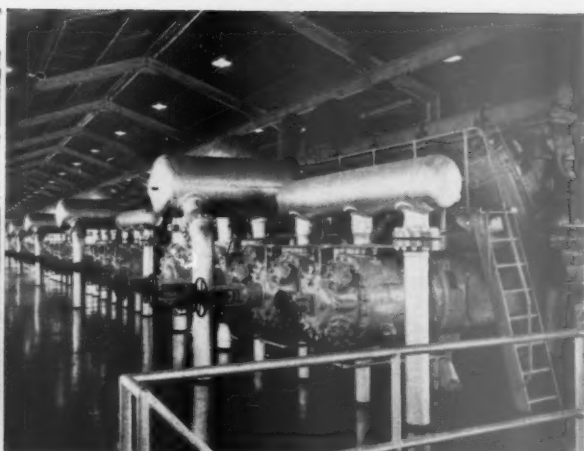
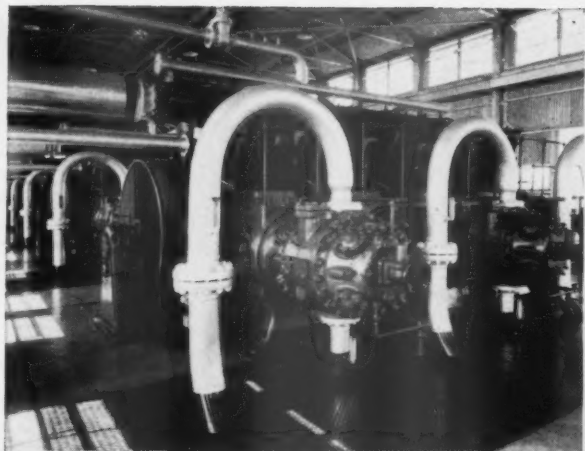
Hydrafrac Facts

Dear Sir:

Your Hydrafrac article on page 120 of the July 31 BUSINESS WEEK contains several errors.

(1) Hydrafrac system was developed and patented by Stanolind, not by Halliburton as story states. Halliburton was exclusive licensee at first, but is now only one of 23 licensees in U. S.

(2) Stanolind was not "itching



How new gas pipelines can save DOLLARS BY THE MILLIONS

THERE'S been a lot of talk, some very misleading, about the total installed cost of horsepower for gas transmission compressor stations.

Here are some facts . . .

Cooper-Bessemer reciprocating engine driven compressors have been installed for \$180 per horsepower. This is *complete* cost including *all* auxiliaries. We can find no other type of compressor that has actually been installed at such low cost.

The latest actual cost we can find on a direct fired gas turbine compressor station installation is \$247 per horsepower. Let's be conservative and assume a reciprocating compressor station would today cost \$225 per horsepower. On a 100,000 horsepower line you would therefore be investing 2 million *extra* dollars . . . on which you would be expected to show a profit.

Now a word about operating expense. Cooper-Bessemer gas engine driven reciprocating or centrifugal compressors are actually showing 25 to

35% *less fuel consumption* than direct fired gas turbines . . . a mighty important saving to any gas pipe line company.

If it's your money going into a new gas pipe line project, or any other heavy-duty power application for that matter, you'll be wise to ask if Cooper-Bessemer engines or compressors are to furnish the power.



Cooper-Bessemer International Corporation
Cooper-Bessemer of Canada, Ltd.

DIESELS • GAS ENGINES • GAS-DIESELS • ENGINE-DRIVEN AND MOTOR-DRIVEN COMPRESSORS • HIGH PRESSURE LIQUID PUMPS

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4, 1954

New Design Features Plus Automatic Cycling Increased Production From 16 to 174 Pistons Per Hour



... Behind Every
SUNDSTRAND
Installation, a
Cost-Cutting
Engineered Production
Analysis

Here's another interesting comparison between an old and a modern Sundstrand Automatic Lathe of approximately the same size and doing comparable work. The old machine represented the latest in design and production capacity of lathes built in 1929. Operations on the old lathe consisted of turning, grooving,

chamfering and facing pistons at the rate of 16 parts per hour. The modern lathe elliptically turns the O.D., faces the head, roughs, finishes and chamfers the grooves of automotive pistons. Production is 174 parts per hour.

... Look at Your Machine Tools When Profits are Threatened

Today's profit protectors are machines embodying modern methods of processing. In milling and turning operations Sundstrand engineers will be glad to help you determine the most profitable method and machine for your plant. There is no obligation for this "Engineered Production" Service.



Additional Data

This new folder explains Sundstrand "Engineered Production" and what you can expect from its application to your metal working problem. Write today. Ask for bulletin BW-347.



SUNDSTRAND
MACHINE TOOL CO.
ROCKFORD, ILLINOIS, U.S.A.

to try out Hydrafrac for several years," for simple reason we have been using process from the start.

(3) There is no connection between Gorgas experiments and Carthage Hydrocol plant at Brownsville, Tex. Latter is designed to operate on natural gas.

(4) Stanolind owns no coal reserves. Company is a producer of crude oil, natural gas, natural gas liquids, and petrochemicals. . . .

For your information, description of how Hydrafrac works was incorrect. The "thick soup" usually consists of kerosene or light crude oil containing soap much like napalm gasoline mixtures used in flame throwers. Pressure is increased until formation fractures, opening up cracks leading away from well bore. Sand carried in mixture remains in fractures to prop them open after fracturing fluid has flowed back into well bore. Further, producer gas has about one-eighth the heat value of natural gas instead of one-third as stated in your story.

GEORGE ROBERTS, JR.
MANAGER, RESEARCH DEPT.
STANOLIND OIL & GAS CO.
TULSA, OKLA.

Lightning—Look Out!

Dear Sir:

Up here at our cottage on Lake Simcoe we read your warnings regarding lightning on the water in your Personal Business section [BW—Jul.17'54,p135] with considerable interest. Flash storms in this area are certainly frequent.

The Toronto Evening Telegram carried an item describing such an accident where the lightning struck exactly as mentioned.

Have subscribed for the past three years and will continue to do so as your articles are certainly timely.

F. O. HIPWELL
SALES MANAGER
ALLIANCE MOTORS DIVISION
THE EASY WASHING MACHINE CO.
LTD.
TORONTO, CANADA

• We hope all our items are not proved by catastrophe.

Why Sales Gained

Dear Sir:

While we enjoyed reading your article on the beer industry [BW—Jul.3'54,p68] we wish to point out that Hamm's did not begin the production of beer in its new San Francisco plant until April of 1954. Hence our sales gain in



Now—a new kind of insurance to protect your business against loss of human assets

Equitable offers business a new kind of low-cost life insurance—available in economy-size packages of \$10,000 or more.

Technical skill—management ability—individual financial backing—these are all valuable assets in any business . . . too valuable to leave uninsured. They are the human assets—vital in sustaining the earning power of a business.

Equitable's new special policy can help protect any business against loss by death of important men—at

a cost so low you may never have dreamed it possible.

This new Equitable Policy is available in amounts of \$10,000 or more. Because protection is purchased in this larger amount, Equitable can pass on important savings in the form of low premium rates.

For an executive at age 35, for example, you pay only \$23.41 a year per \$1000—15% less than before. Annual dividends may be used to reduce these premiums.

NEW FLEXIBILITY. This policy has

conversion features at new low rates only offered by Equitable.

NO OTHER POLICY offers such flexibility at such low cost. Even if applicants are not standard health or occupational risks, this protection may still be obtained at an appropriately low special rate.

SEE THE MAN FROM EQUITABLE—TODAY

The
EQUITABLE
Life Assurance Society of the U.S.
Home Office: 393 Seventh Avenue, New York 1, N. Y.

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General Nathan Bedford Forrest's military philosophy won battles.

At SKF, we've applied the same thinking to the battle against friction—give industry the most and do it first.

Here's what this list of SKF firsts means to you...

It means that when your designers consult one of SKF's Field Engineers, they're sure of recommendations which will apply the newest developments in the science of anti-friction to your products.

SKF's "fustest with the mostest" attitude has made hundreds of things better, less costly, easier to sell.

SKF INDUSTRIES, INC., PHILADELPHIA 32, PA.
—manufacturers of SKF and HESS-BRIGHT® bearings.

- the 1st Self-Aligning Ball Bearing
- the 1st Spherical Roller Bearing
- the 1st Spherical Roller Thrust Bearing
- the 1st Rocker Mount Design for Paper Machinery
- the 1st Railroad Journal And Traction Motor Bearings
- the 1st Red Seal Bearings
- the 1st Hydraulic Mounting and Removal System
- the 1st Type "C" Spherical Roller Bearing—Up To 50% Increased Capacity, 2 to 3½ Times Increased Life



SKF®
BALL AND ROLLER BEARINGS

1953 was in no way connected with our new San Francisco operation.

It is difficult to point to any one reason for Hamm's success but certainly there are many things that have contributed to that success. We might point to the following:

Emphasis on quality control of the product.

An advertising theme that is unique in the industry.

Growth in the big Chicago market.

The number one position in the four-state home area. . . .

W. A. CURTIS

THEO. HAMM BREWING CO.
ST. PAUL, MINN.

Plenty of Steam

Dear Sir:

. . . The news item, Back Yard Choo-Choo [BW—Aug. 14 '54, p. 123] is of interest. Maybe Choo-Choos are hard to find in Columbus, Ohio but they certainly aren't here in North Little Rock. Offhand I'd say there are 25 or 30 just sitting in the yards of the Missouri Pacific R.R. rusting away. This surplus of steam Choo-Choos results from the "dieselization" of the road and incidentally has caused considerable wailing and gnashing of teeth among the old time steam-fitters and boiler makers employed by MoPac when they retired the steamers. Those employees with many years of experience and seniority on the steamers were laid off while younger men with diesel experience were being sought after. Created quite a ruckus here at the MoPac shops not so long ago. . . .

W. F. STEWART

A. R. & T. ELECTRONICS, INC.
NORTH LITTLE ROCK, ARK.

Time for a Change

Dear Sir:

I have always found BUSINESS WEEK's Readers Report section especially interesting. Last week it seemed to me that it was more readable than ever. Is there a new typographical layout or typeface that you are using? If so, it certainly helps.

WILLIAM RUDER

RUDER & FINN ASSOCIATES
NEW YORK, N. Y.

• Reader Ruder is first to note the change and comment on it. We are now using Times Roman instead of Electra type and the type column width is 12 picas instead of 13.



We like the door's "electronic politeness"



THE PRUDENTIAL BUILDING
South-Central Home Office
Jacksonville, Florida

The beautiful new 22-story PRUDENTIAL INSURANCE COMPANY BUILDING—tallest office structure in Florida—will have 9 Otis AUTOTRONIC operatorless elevators. It will be the center of Prudential's vast South-Central Home Office operations, and its 8 upper floors will be available to other tenants. This is one of more than 175 new and modernized office buildings, hotels, hospitals, banks, and department stores that have given AUTOTRONIC elevators an overwhelming vote of confidence—by buying it!

Architects: Kemp, Bunch & Jackson

Passengers quickly discover why they like the Otis Electronic Elevator Door. It's the invisible *electronic zone of detection* that extends in front of the leading edges of both car and hoistway doors up to shoulder height—as shown in phantom above. It inspires passenger confidence.

Whenever this *electronic zone* detects a person's presence in the doorway, the doors politely reverse before they can touch the passenger. But if there is no chance of passenger interference, the doors close promptly after each stop.

This *zone of detection* prevents unnecessary delays. If a talkative passenger lingers overlong in the doorway, a buzzer sounds and the doors slowly, firmly—but politely nudge the passenger out of the doorway so that the car can proceed on its way.

The Otis Electronic Elevator Door is the crowning achievement in the field of the operatorless elevator. Its successful development insured the ability of operatorless elevators to move great masses of people in busy buildings with the greatest degree of safety. Ask any of our 268 offices for details.

Otis Elevator Company, 260 11th Ave., New York 1, N. Y.



COMPLETELY AUTOMATIC
AUTOTRONIC®
ELEVATORING



"Fire engines" in Cellophane...what next?



Completed models are authentic miniatures of nostalgic Americana. Like fire-fighting equipment, packaging can become a museum piece too. Keep yours up-to-date with protective, low cost Sylvania Cellophane.

Yes, cellophane—and with good reason! First off, by sealing the box in Sylvania Cellophane, the manufacturer of this model kit prevents loss or pilferage of the tiny shaped parts. A neat economical package. Contents are smartly "showcased" so shoppers can see all the plastic parts—clearly—easily. This stimulates interest—helps speed sales.

Want to learn what's new and "hot" in sales-promoting packaging? Talk to a Sylvania representative. It's his business to help you. Sylvania Division, American Viscose Corporation, 1617 Pennsylvania Blvd., Philadelphia 3, Penna.

AMERICAN VISCOSE CORPORATION
AVISCO YARNS AND FIBERS SYLVANIA CELLOPHANE



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BUSINESS OUTLOOK

BUSINESS WEEK
SEPT. 4, 1954



Confidence is a delicate thing. It might not survive many such bruises as it has been dealt by the stock market recently (page 66).

Businessmen need to have confidence in themselves, in government, in currency, even in world developments. That's a large order. Any old thing, no matter how extraneous, might do damage in the circumstances.

The stock market could, quite easily, play the villain.

No matter how low the stock market's reputation for forecasting has fallen, shrinking share prices influence people's spending.

At the same time, business confidence itself isn't 100%. Occasionally you find someone who questions if mere stabilizing is enough.

—•—

Slowness in steel has been one reason for questioning the soundness of the recovery. But better things are coming:

- More steel will be needed by business generally—simply to sustain present operating rates in plants that have been drawing on inventory.

- Larger orders are about due from the auto industry. Car producers have to be sure steel will be on hand when production lines start rolling on new models—even if that won't be until October or November.

Suppose metalworking plants have been getting about 10% of their steel out of inventory through the spring and summer. They're bound to be down to a hand-to-mouth basis about now.

Steel operations must expand, probably to between 70% and 75% of capacity, just to make up the difference (BW—Aug. 7 '54, p17).

—•—

Unemployment is retreating into pockets—some of them areas that are chronically ill along with a few whose viruses are curable.

This retreat should be a pretty hopeful sign.

Basically, it indicates a fairly general improvement in manufacturing. Even in a few sectors that still are dull, such as autos and steel, a pretty trustworthy timetable for added jobs can be written.

Applications for unemployment compensation have dropped sharply in the last two months. And, as was to be expected, the numbers drawing jobless checks have begun to decline, too.

New claims topped 350,000 for one week, early in July (due in part, of course, to vacations that workers feared might stretch into layoffs). Each weekly figure since then has been down, the latest being 250,000.

Those drawing state compensation numbered more than 1.9-million early in July; now they total little more than 1.7-million.

As favorable as the trend is, however, remember that the figures are just about twice as high as they were this time last year.

Pockets of unemployment show up, in coal, basic steel, and textile areas now—West Virginia, Pennsylvania, Kentucky, Alabama, Rhode Island.

Metalworking centers are becoming less conspicuous, however.

BUSINESS OUTLOOK (Continued)

BUSINESS WEEK
SEPT. 4, 1954

Michigan, with its auto plants, still shows up high, of course. But unemployment compensation has pulled well below the national average in Ohio, while Illinois is getting back into line.

Manufacturing employment undoubtedly turned the corner in August.

July's report from the Bureau of Labor Statistics had indicated only 15,661,000 in factory jobs. Just 11 months earlier, at the high point of the boom, the figure had been slightly above 17½-million.

You're entitled to figure on a seasonal rise of 200,000 or so from July to August. Anything more than that would be all to the good.

—•—

Business failures, like unemployment, still are large enough to be disturbing. But, also like unemployment, they're not as bad as they were.

Liabilities involved in bankruptcies have declined each month save one since the peak of \$57-million was touched in March. July's was the year's smallest except for January (generally a low month).

And July's \$32-million contrasts with \$41-million last year.

It should be noted, though, that July liabilities this year were the highest for the month since the war except for the year-ago figure.

—•—

Retailers have a special interest in what happens to employment and payrolls in manufacturing from now on.

Personal income, over all, is running only a fraction of a percentage point behind a year ago. After taxes, consumers have more to spend now than they did in 1953. Employees in trade and service industries and in construction are making as much or more than last year.

But payrolls in mines and factories, at an annual rate of \$83.8-billion now, are \$6-billion below this time last year.

Indications are that payrolls are about to turn up.

Had it not been for strikes and more-than-seasonal slack in the auto industry, wage and salary payments in manufacturing would have shown some improvement as early as July.

—•—

Our changing food habits: The trend to turkeys started during the war and early postwar years, when meat was scarce. It gained with the development of smaller, plumper birds. Now year-round turkey eating is well established.

Better production, processing, distribution, merchandising all helped.

Through July, farmers marketed about 6-million from this year's hatch, 1-million ahead of last year. August probably swelled the total above 10-million and ran the gain over a year ago to 1½-million.

Fortunately, we can eat our turkey this year and have it, too. Despite the heavy early-season consumption, there will be lots of white meat and second joints left for Thanksgiving and Christmas.

Nearly 43-million large turkeys were grown this year, about 2.3-million more than last; there were 18.1-million small birds, up 2½-million.

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Mexicans and Californians celebrate Callexico's pioneer past in its annual Desert Cavalcade

Border to border... **the bank that knows California**

From Callexico on the Mexican border to Crescent City near the Oregon line, Bank of America's 545 branches cover the 900-mile length of California. In rural communities, in manufacturing areas, in great metropolitan centers—this bank knows every part of California with the friendly familiarity of a home-town bank.

Through its unique statewide system, Bank of America maintains an efficient collection service...supplies local credit information...and performs an overall banking function that is exclusive with the *one* bank that serves *all* of California. For information write Bank of America, 300 Montgomery Street, San Francisco,

or 650 South Spring Street, Los Angeles. Attention: Corporation and Bank Relations Department.

With resources of over \$8 billion, Bank of America is the world's largest privately owned bank. Its shares are held by more than 200,000 stockholders.

...Get to know the bank that knows California

Bank of America
NATIONAL TRUST AND SAVINGS ASSOCIATION

Bank of America has main offices in the two Reserve cities of California, San Francisco and Los Angeles. Overseas branches: London, Manila, Tokyo, Yokohama, Kobe, Osaka, Bangkok, Guam. Representatives: New York, Mexico City, Milan, New Delhi, Paris and Zurich. Correspondents throughout the world. Bank of America (International), New York, a wholly owned subsidiary; overseas branch, Duesseldorf.

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MEMBER FEDERAL DEPOSIT INSURANCE CORPORATION

This is National Steel



Meeting the need for better zinc-coated steels with this new continuous galvanizing line

National Steel's continuous improvement of plant and product is exemplified in this painting of a new continuous galvanizing unit recently installed at Weirton Steel Company, a National Steel division. In this 710-foot-long unit, steel enters at one end, is automatically cleaned, annealed, and zinc-coated, to emerge at the other end in galvanized sheets or coils.

Galvanizing results in a product that combines the strength of steel with the corrosion-resistance of zinc, a job that National Steel's new continuous line does superbly well. In addition, the line turns out a product greatly superior to

galvanized material made by conventional pot dip methods. For in this new galvanized steel, the bond between zinc coat and steel is so tight that sheets can be formed, bent, drawn or stamped without danger of the surface flaking, cracking or peeling.

Here, as in many other fields, National Steel demonstrates its forward-looking philosophy . . . a philosophy that calls for constant improvement of products

and the methods by which they are made. This is National Steel—entirely integrated, completely independent—one of America's leading steel producers.

New Color Film Now Available

"Achievement in Steel" . . . a new 16-mm color film telling the dramatic story of steel is now available to organized groups. To obtain this film for your group, write to "Achievement," National Steel Corporation, Pittsburgh, Pennsylvania.

NATIONAL STEEL
GRANT BUILDING



CORPORATION
PITTSBURGH, PA.

SERVING AMERICA BY SERVING AMERICAN INDUSTRY



**SEVEN GREAT DIVISIONS
WELDED INTO ONE COMPLETE
STEEL-MAKING STRUCTURE**



GREAT LAKES STEEL CORP.
Detroit, Mich. A major supplier of standard and special carbon steel products for a wide range of applications in industry.



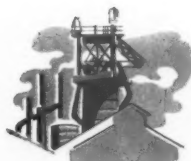
WEIRTON STEEL COMPANY
Weirton, W. Va. World's largest independent manufacturer of tin plate. Producers of many other important steel products.



STRAN-STEEL DIVISION
Ecorse, Mich. and Terre Haute, Ind. Exclusive manufacturer of famous Quonset building and Stran-Steel nailable framing.



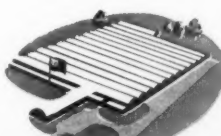
HANNA IRON-ORE COMPANY
Cleveland, Ohio. Producer of iron ore from extensive holdings in the Great Lakes area.



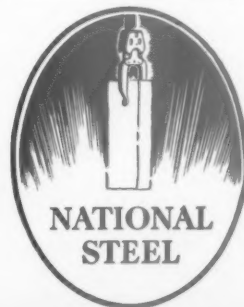
THE HANNA FURNACE CORP.
Buffalo, New York. Blast furnace division for production of various types of pig iron.



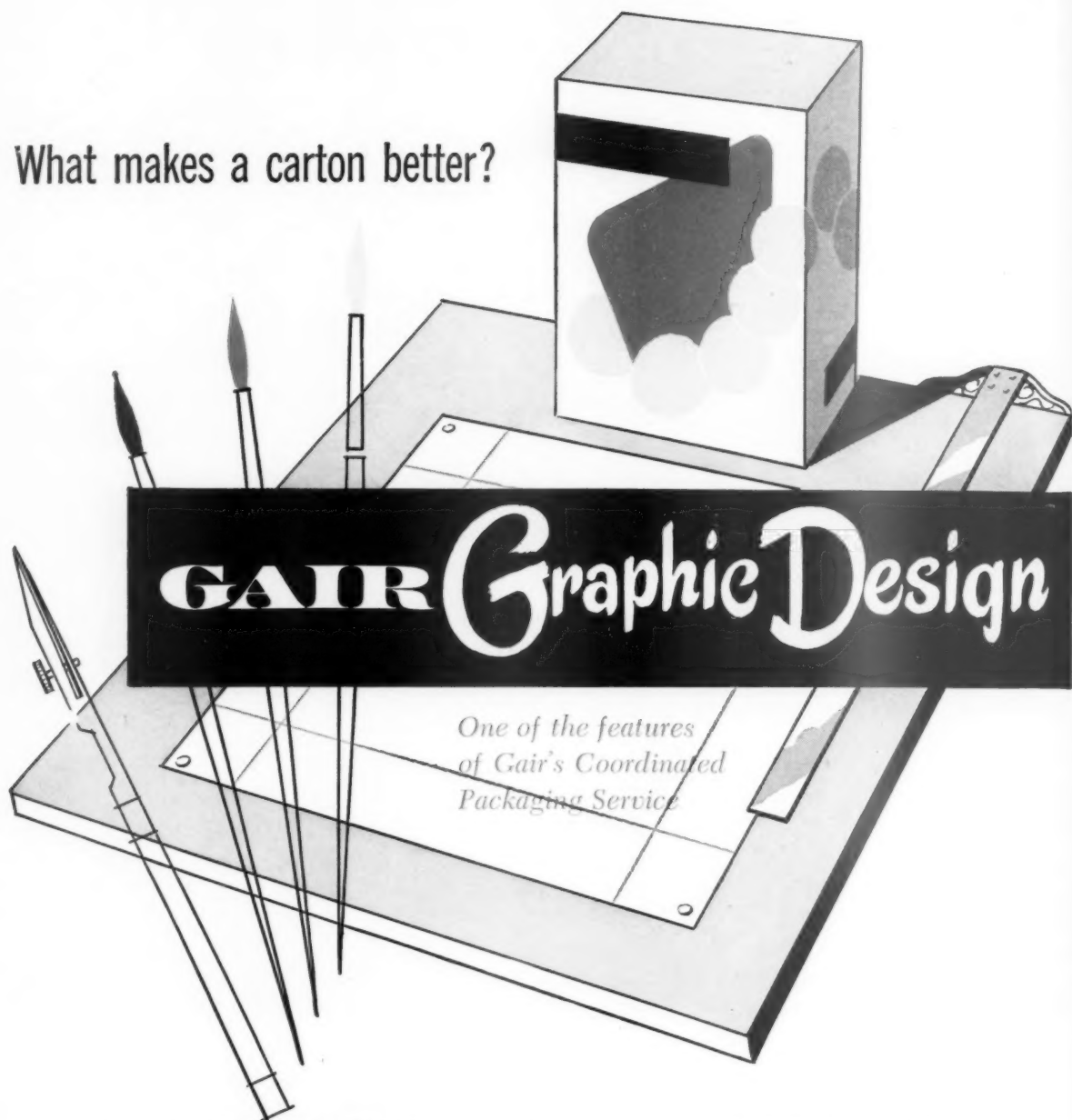
NATIONAL MINES CORP.
Supplies high grade metallurgical coal for the tremendous needs of National Steel mills.



NATIONAL STEEL PRODUCTS CO.
Houston, Texas. Warehouse and distribution facilities for steel products in the Southwest.



What makes a carton better?



GAIR Graphic Design

*One of the features
of Gair's Coordinated
Packaging Service*

In the multi-colored world of a modern store, where your product has to fight for attention, Gair-designed cartons spark the shopper's urge to look, to buy.

Here's why: More than good art goes into a Gair design . . . more than a keen sense of merchandising. Even the details of carton construction, the requirements of printing on paperboard and the effects of certain inks are considered by the Gair art staff. This talent, developed and passed on over the years since Gair produced the first

mechanically-made folding carton, is part of the service Gair offers you.

Add *graphic design* to the other features—faithful reproduction of the artwork, structural design, carton production from a variety of materials, expert help on mechanical packaging—and you have the story on Gair's Coordinated Packaging Service.

This service can solve *your* packaging problem, too; we'll be pleased to tell you how. Write for a copy of *Cartons by Gair*. Please address request to Dept. 55.

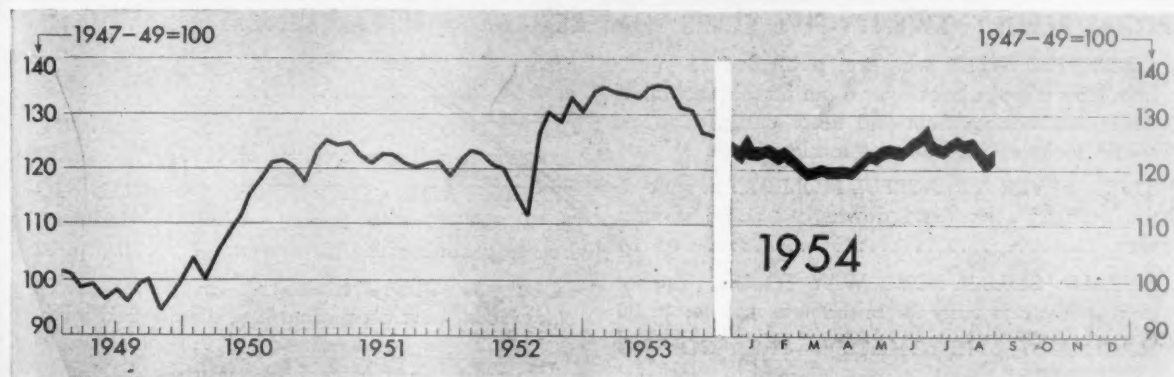


GAIR

FOLDING CARTONS
SHIPPING CONTAINERS
PAPERBOARD

ROBERT GAIR COMPANY, INC. • 155 EAST 44th STREET • NEW YORK 17

FIGURES OF THE WEEK



Business Week Index (above) *123.5 †123.2 125.2 134.3 91.6

PRODUCTION

	Latest Week	Preceding Week	Month Ago	Year Ago	1946 Average
Steel ingot production (thousands of tons).....	1,544	†1,515	1,527	2,040	1,281
Production of automobiles and trucks.....	113,169	†121,736	130,523	152,866	62,880
Engineering const. awards (Eng. News-Rec. 4-week daily av. in thousands).....	\$53,292	\$52,956	\$55,051	\$44,093	\$17,083
Electric power output (millions of kilowatt-hours).....	9,227	9,207	9,139	8,540	4,238
Crude oil and condensate production (daily av., thousands of bbls.).....	6,141	6,156	6,255	6,621	4,751
Bituminous coal production (daily average, thousands of tons).....	1,260	1,293	1,182	1,595	1,745
Paperboard production (tons).....	241,922	251,722	237,843	253,240	167,269

TRADE

Carloadings: manufactures, misc., and l.c.l. (daily av., thousands of cars).....	67	67	65	77	82
Carloadings: raw materials (daily av., thousands of cars).....	46	48	49	59	53
Department store sales (change from same week of preceding year).....	none	†+2%	+1%	none	+30%
Business failures (Dun and Bradstreet, number).....	184	246	195	182	22

PRICES

Spot commodities, daily index (Moody's Dec. 31, 1931 = 100).....	410.7	420.8	427.7	415.6	311.9
Industrial raw materials, daily index (U. S. BLS, 1947-49 = 100).....	86.6	†86.2	85.8	85.4	††73.2
Foodstuffs, daily index (U. S. BLS, 1947-49 = 100).....	98.5	99.6	98.4	95.2	††75.4
Print cloth (spot and nearby, yd.).....	18.9¢	18.9¢	19.0¢	21.0¢	17.5¢
Finished steel, index (U. S. BLS, 1947-49 = 100).....	144.5	144.5	144.5	141.7	††76.4
Scrap steel composite (Iron Age, ton).....	\$28.67	\$28.67	\$27.83	\$40.00	\$20.27
Copper (electrolytic, Connecticut Valley, E&M, lb.).....	30.000¢	30.000¢	30.000¢	29.970¢	14.045¢
Wheat (No. 2, hard and dark hard winter, Kansas City, bu.).....	\$2.44	\$2.33	\$2.37	\$2.21	\$1.97
Cotton, daily price (middling, ten designated markets, lb.).....	34.17¢	34.09¢	34.45¢	32.91¢	30.56¢
Wool tops (Boston, lb.).....	\$2.30	\$2.35	\$2.25	\$2.12	\$1.51

FINANCE

90 stocks, price index (Standard & Poor's).....	240.5	†246.0	245.2	187.2	135.7
Medium grade corporate bond yield (Baa issues, Moody's).....	3.47%	3.48%	3.50%	3.86%	3.05%
Prime commercial paper, 4-to-6 months, N. Y. City (prevailing rate).....	1½-1½%	1½-1½%	1½%	2½%	¾-1%

BANKING (Millions of dollars)

Demand deposits adjusted, reporting member banks.....	54,215	53,748	54,949	53,330	††45,820
Total loans and investments, reporting member banks.....	82,977	82,861	81,445	79,301	††72,036
Commercial and agricultural loans, reporting member banks.....	20,773	20,759	21,524	22,891	††9,299
U. S. gov't guaranteed obligations held, reporting member banks.....	36,107	36,185	34,221	32,005	††49,879
Total federal reserve credit outstanding.....	24,859	25,183	25,263	26,131	23,883

* Preliminary, week ended August 28, 1954.

† Revised.
†† Estimate.

‡ Date for "Latest Week" on each series on request.

in BUSINESS this WEEK...

SPECIAL REPORT: TWENTY-FIVE YEARS THAT REMADE AMERICA p. 75

BUSINESS WEEK was first published 25 years ago. Now it looks back over a period that reshaped American management and labor and production—and looks at the changes made in:

STEEL: NEVER A PEACEFUL MOMENT. In spite of the industry's ups and downs, it's come a long way p. 84

METALS: STILL A LONG WAY TO GO. The jet and atomic age calls for brand-new metals. . p. 86

MACHINERY: AUTOMATION—IT'S COMING EVERYWHERE. And it may change Americans' lives more than any other single thing. p. 88

AUTOS: WANTED—BIG NEW MARKETS. The

luxury has become a necessity—and Detroit eyes new fields p. 90

CHEMICALS: NO GROWTH LIMIT IN SIGHT. Progress is still spectacular. p. 91

TEXTILES: THE SYNTHETICS THREATEN TO TAKE OVER. New fibers remodel the industry, but its problems remain the same. p. 92

FOOD: REVOLUTION IN THE SHOPPING BAG. New foods, new processing and distribution methods remake a basic industry. p. 94

THE TREND: THE NEXT 25 YEARS. They promise as much change as the last 25 years have brought p. 156

GENERAL BUSINESS:

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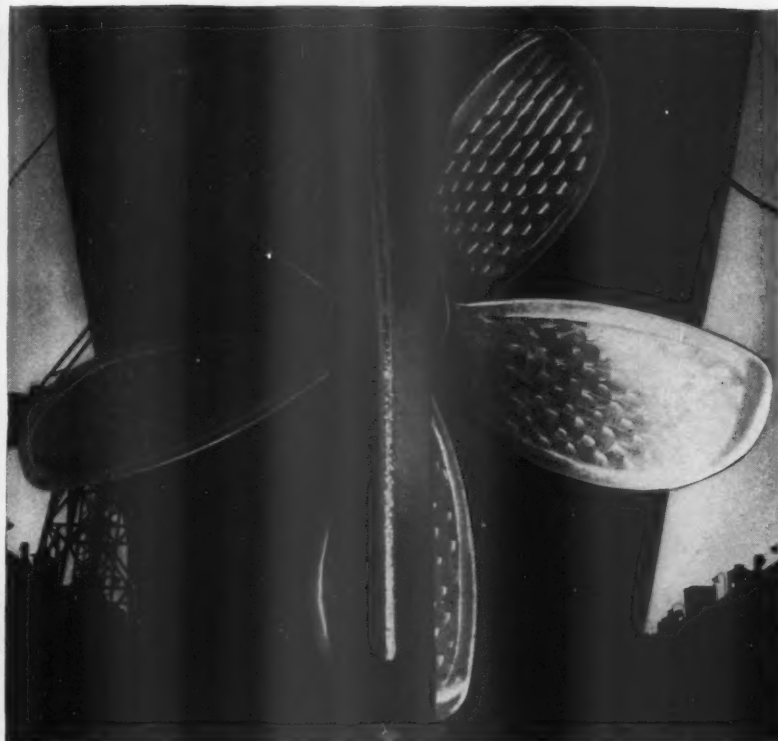
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No one knows all of the many other uses to which nickel-aluminum bronze may be put. It has already proved itself in pump and valve parts and in turbine runners in power plants. In such parts its high corrosion resistance is a great advantage.

This "Big Wheel" can take it

A big ship can "chew up" as many as 6 wheels during its naval career. Actually, you can't blame it on the ship. It's the water.

Water, particularly salt water, slowly eats away at the bronze traditionally used for propellers. Floating debris takes a bite now and then. And bursting bubbles in the turbulent water around the wheel take their toll, too. (Engineers call this action "cavitation".)

Finally, its surface pitted and its edges scarred by this progressive destruction, the wheel is too rough to perform effectively and efficiency drops rapidly. In time it may be weakened to a point where it can't be depended upon to carry the load.

But that's all changed now. The wheel you see above has been in salt water service for nine months. Yet

its surface is as bright and smooth as when it left the foundry that made it. The "swirl marks" of the final polishing are still visible.

The solution to this problem of propeller wear was found in nickel-aluminum bronze.

Nickel-aluminum bronze is just one more example of the way nickel, as an alloying element, imparts to other metals such desirable properties as strength, hardness, toughness and resistance to corrosion, shock and fatigue.

Yours for the asking . . . draw on Inco's fund of useful information on the properties, treatment, fabrication and performance of alloys containing nickel.

Write for . . . "List A" of available publications.



An added advantage of nickel-aluminum bronze in propellers is its combination of high strength and light weight. The 5-bladed propeller installed on the S.S. American Clipper of the U. S. Lines is 20% lighter than the 4-bladed wheel previously used on this class of vessel. This lowered weight, combined with the 5-blade design, reduces stress on the tailshaft and reduction gear wear. Substantial savings in fuel consumption have been reported in this installation.



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You'd like to have more salesmen like him



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appointments that often save hours of wasted waiting time.

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Dallas to New Orleans....	\$1.25
Boston to Los Angeles....	\$2.50

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BELL TELEPHONE SYSTEM





MENDES-FRANCE: French premier's neutral stand on EDC led to final defeat in Assembly. For the West that means . . .

Now: New Kind of Cold War

The East-West struggle has entered a new phase—one that will be fought with diplomacy, propaganda, economic warfare, and perhaps H-bomb blackmail, but not with bullets. The collapse of the European Defense Community this week, coming on top of Geneva, makes that almost certain.

This new phase starts with the Communists holding the edge. They enter it as a tightly-knit bloc, with Moscow in full control of policy. The West, by contrast, must wage the struggle with an alliance that has loosened dangerously and has its leadership now split between Washington and London.

• **Contrast**—For both sides, this prospect contrasts sharply with the period of East-West conflict that started with Stalin's attack on South Korea, that passed its peak a year ago (Jun. 27 '53,

p. 27), and has just come to a final end.

During that period the Communists were ready to risk the kind of direct aggression that brought the world to the edge of all-out war. The West responded, under U.S. leadership, with a tremendous military buildup and a tighter alliance than the democracies have ever formed, except during a worldwide conflict.

With Geneva, Communist military aggression has stopped, probably for some time ahead. Moscow and Peking already are operating with strategy of "peaceful coexistence"—which means they aim to bring Europe and Asia under their control by exploiting every difference that exists in the free world. Moscow will play upon the German desire for unity, probably soon call a new Big Four Conference to discuss

this question. Peking will demand U.N. membership plus surrender of Formosa, try to isolate the U.S. on this issue.

I. Foundation Undermined

The French rejection of EDC will push the recent loosening of the Western Alliance a good bit further. France's decision has undermined one of the key foundations of Western policy: the integration of Western Europe around a Franco-German partnership closely linked with the U.S. and Britain through NATO. Now the West must resist Communist pressure by harmonizing different national policies—more as the British operated in the Nineteenth Century than as the U.S. has handled things during the past four

years. And, by the same token, London is more likely to take the lead in this process than Washington. Any substitute for EDC that relied just on a military buildup in West Germany would fail to fit the new situation.

• **The Bomb**—The H-bomb has had a lot to do with the changed nature of the East-West contest. On one hand, it seems to have convinced the Russians that open aggression has become too dangerous a proposition to risk. On the other, it has convinced Britain and our other West European allies that their survival hinges on coming to some kind of terms with the Communist bloc. This conviction, combined with a new feeling of economic strength, lies behind the independent line that Britain and France have been taking recently, and that West Germany may take tomorrow.

If the West can rebuild its unity on a new basis, there's a good chance that the Communists can be held where they are. Then peaceful coexistence, as we understand the phrase, might begin to mean something. But meanwhile this new phase of the East-West struggle will be a ticklish time for the West. And it could end with coexistence on Moscow's terms.

II. A New Relationship

There's no doubt that the U.S. suffered a serious blow when the French scuttled EDC. Since 1950, federation has been the goal of American policy in Western Europe. EDC and the Schuman coal-steel pool were to be merely the starting points. Political and economic integration were to follow.

In this way, Washington hoped to build a self-sustaining power center between the U.S. and Russia—a center linked with the U.S. This could have tipped the balance of power against Moscow and done it decisively enough to force the Russians finally to give up East Germany and perhaps their other East European satellites.

The beginnings of the federation scheme coincided with the birth of the Bonn Republic in West Germany. And the leader of this state, Chancellor Konrad Adenauer, became the chief European sponsor of Franco-German unity. Had EDC come to life, Adenauer might easily have become Europe's George Washington. As things stand today, he is in danger of having his whole foreign policy repudiated.

In fact, with EDC dead and West Germany's position completely up in the air, all the decisive relationship in Western Europe—between France and Germany, France and Britain, Britain and Germany—will have to be revamped. And so, of course, will U.S. relations with Western Europe.

• **France**—Apparently, Premier Mendes-

France figures that he can put the pieces together again within the framework of NATO. He is prepared to give Bonn the grant of sovereignty that was tied into EDC and to let West Germany rearm by stages—provided that the NATO Council is given enough authority to exercise a tighter control than it now has over the military forces of member states.

Mendes-France has authority from the French Parliament to make a try for such a solution.

But the French Premier will find it tough to satisfy both his own parliament and Adenauer's. In Britain, there is a chance that the Labor Party will officially withdraw its support for German rearmament, thus putting a crimp in Churchill's policy.

III. Disengagement for U.S.

The U.S. will no longer play the same role in Europe as it has done for the past four years. As the chief sponsor of European federation, Washington was deeply involved in all West European problems—military, political, and economic. Now this role has come to an end.

The Eisenhower Administration is determined to keep our military commitments in Europe. But in political and economic matters there's bound to be a process of disengagement. For example, the U.S. won't be intimately involved in problems like the Saar. These will become a purely European responsibility. At the moment, we seem prepared to let the British take a lead in trying to find an alternative for EDC.

As this disengagement process goes on, the U.S. will have more freedom of action in dealing with individual European countries. And there will be some advantages in that. But our over-all influence undoubtedly will diminish.

• **Britain**—It's in the cards for Britain, which has never been enthusiastic about EDC, to play a bigger role in West European affairs. You'll probably find both Adenauer and Mendes-France flying to London to see Churchill in the next few weeks.

But it's too soon to say for certain what the British game will be. There's no doubt that Churchill and Eden favor German sovereignty and some degree of rearmament. Still the British might throw their weight on the French side if it comes to a dispute between Paris and Bonn—even if that does mean a Paris-London vs. Bonn-Washington lineup.

• **Trouble for Adenauer**—One thing London doesn't want is to see the Adenauer government replaced by a nationalistic regime. And this is a possibility you can't ignore.

Even if the elderly chancellor rides

out the present storm successfully, he will have to give a lot of ground to the Free Democratic Party, on which his coalition depends, and to the opposition Social Democrats. There's strong pressure in both these parties for another try at negotiating German unification with the Russians.

IV. Moscow Will Exploit

Such a meeting now seems to be likely. Moscow is sure to exploit the victory it has won with the defeat of EDC. Probably Molotov figures that this is the time to achieve his goal of pulling Germany out of the western camp and into a neutral position. At a new Big Four conference the Soviet Foreign Minister will offer better terms for German unity than he did at Berlin in January. As a result, the West will have to come up with a more flexible policy on German unity and European security than it's had before.

• **Two Hinges**—The outcome of such a meeting will hinge on two things: (1) How successful Adenauer is in keeping the Free Democrats and Social Democrats in line on the questions of West German rearmament and all-German unity; (2) how closely Britain and France stick with Adenauer and the U.S. at any such conference.

If Molotov can't get anywhere in weakening Adenauer's position or in cracking Western unity, the Russians won't be able to reap any real dividends from the defeat of EDC.

• **Asia**—In Asia, meanwhile, the Communist bloc will be pushing a policy that's sure to test Western unity as severely as Indo-China did. Just as Moscow will present German neutralization as the key to peace in Europe, so Peking will talk up Formosa as the key to peace in Asia.

In doing so the Chinese Reds will be shooting for two things:

• To drive an even deeper wedge than exists now between the U.S. and Britain and Asia. In this maneuver, Peking hopes to help get Labor into power in Britain.

• To push the Asian neutrals, especially India and Indonesia, into the Communist bloc. At the United Nations this fall, you can expect to see India and Indonesia backing Red China in its demands for U.N. membership and control of Formosa.

• **SATO**—To meet this new Chinese policy the U.S. already is revising its ideas about SATO, the Southeast Asian Security pact, which will be under discussion at Manila next week. Originally, Washington conceived of SATO as a purely military defense pact. Now we are stressing the economic and political angles even more than the military. This pleases Britain and might influence the neutrals in our favor.

Atom Shrinkage

Eisenhower plan for peacetime nuclear energy pool melts down under harsh rays of reality.

Pres. Eisenhower's plan for creating a peacetime pool of atomic energy has been whittled down to the point where it bears little resemblance to the proposal he dramatically put forward last Dec. 8.

The main reason for this, as one official put it, is that "our technology has not kept pace with our oratory."

Eisenhower proposed creating an atomic energy agency within the United Nations to supervise the use of a "bank" of fissionable materials that would be distributed to have-not countries for their development.

It was part of a spectacular effort to strip the atom of its military casing and adapt it to the art of peace.

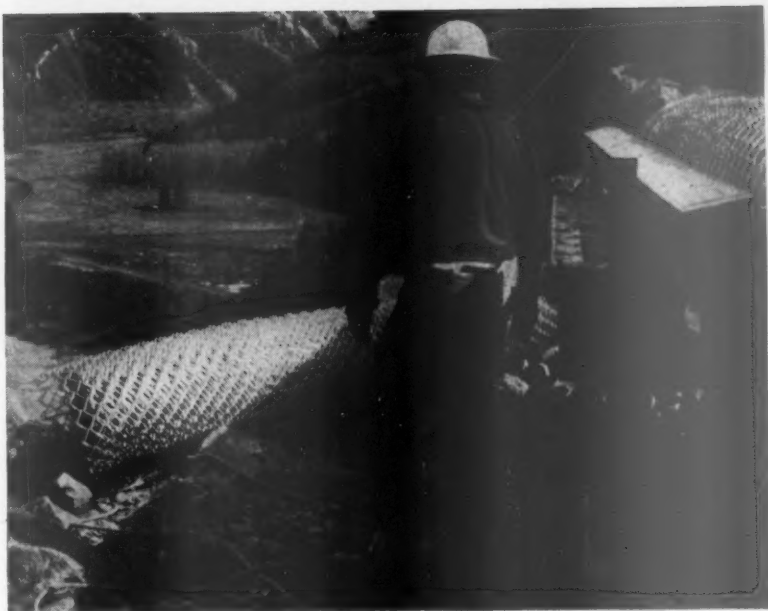
• **Policy Firms Up**—Ever since the President announced his plan, foreign policy and atomic energy experts have been trying to draft a specific plan that would do this. Russia's flat refusal to join in any way has complicated their task and also made them more cautious. But the U.S. intends to go ahead without Russia. A plan is to be unveiled at the forthcoming meeting of the U.N. Assembly.

But all that will be proposed is a plan to create an atoms-for-peace clearing house. This would serve only to handle questions about peaceful uses of atomic energy—such as in medicine, agriculture, and industrial power.

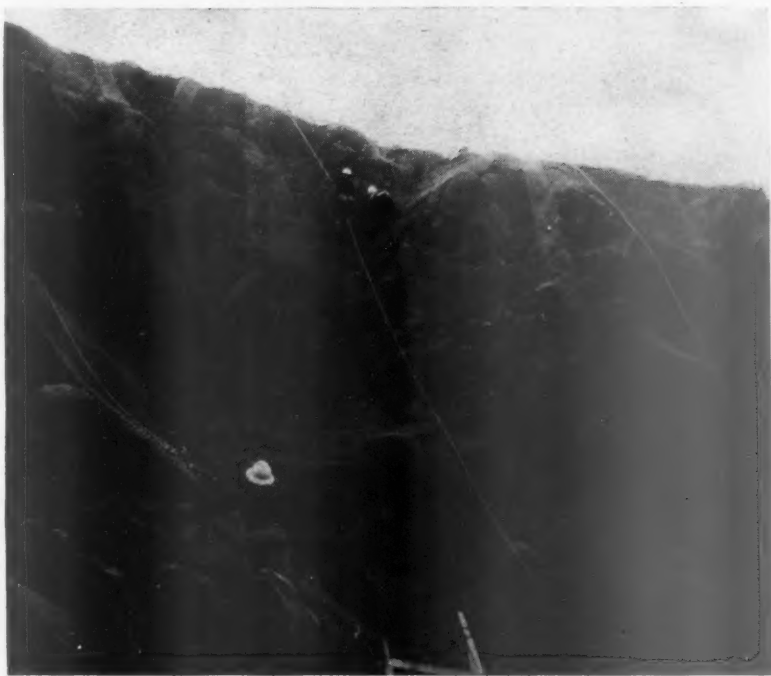
This agency would control no stockpile of fissionable material, no power reactors. Theoretically, however, it could authorize countries that could build reactors to send them—for a specific purpose—to some country, such as India, that could use them.

• **Plans**—What is envisaged now, is something that would help swap information back and forth among member nations. There would be no disarmament feature. Architects of this scaledown are disappointed, but, they contend, it's the most that could be accomplished under present international conditions. They are also conscious that the world generally will be disappointed that the plan isn't so far-reaching as Pres. Eisenhower indicated it would be in his original proposal.

These officials admit, however, that the U.S. must move cautiously, in view of Russia's present obstructionist attitude. They also think that, despite reports to the contrary, it is too early to think about shipping portable atomic reactors to power-starved countries.



Engineers Fence In a Mountain . . .



. . . To Keep Boulders Out of Dam

When construction workers started to cut away part of a mountain to build spillway tunnels for the Palisades Dam on the south fork of the Snake River in Idaho, huge boulders broke loose and tumbled down on workers at the bottom of the cut. Dam officials decided to try to prevent this by installing steel mats to hold the rocks

in place. U.S. Steel's Cyclone Fence Div., which won the contract, teamed up with Palisades Contractors to lay more than 20,000 sq. ft. of strong steel fencing down the side of the mountain. If the chain link matting does the job at Palisades, engineers may consider the idea for use on highway construction and on railroad cuts.



DAIRYMAN R. D. Mayer of Osceola, Iowa (above, left) tells BUSINESS WEEK reporter how he feels about Eisenhower's new farm program. Says Mayer: "We're taking the new law in stride. The dairy industry partly made its own bed by slackening quality. Now we've got to clean up." Mayer's Guernseys won blue ribbons at Sioux Falls fair.

In the Corn B

The political season and fair time came simultaneously at Sioux Falls, S. D., last week. The Democratic Party held a 15-state Midwest Farm Conference while the Sioux Empire Fair was having its annual show of the best in farm products from the surrounding area. It was an ideal time to quiz farmers on how they are feeling. Consensus: Republican.



RANCHERS Fred Blow of Watauga, S. D., and W. J. Bordeaux of Sioux Falls see a Democratic swing. Says latter: "Farmers are mad, but they ain't saying nothing."



SEED SELLER G. C. Williams, left, says: "Things have changed a lot since '52. Farmers worry what the Republicans will do next. A lot are switching Democratic."

n Belt the Crop Is Good for the GOP

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EQUIPMENT SALESMAN John Hogan covers six South Dakota counties for Allis-Chalmers. He says: "The farmer is pretty satisfied. The corn crop will be good. We have to bargain, but we'll have a better selling year than last—we'll crowd 1952."



BEEF GROWER Thomas Held of Hinton, Iowa, says: "I haven't been in the price support program since the 1930s, so the new law is O.K. by me. I don't hear many complaints. I think we have to get back to supply and demand."



AUTO SALESMAN Ivan Hagen set up a used car lot at the fairgrounds and made some sales. "When the farmer is prosperous," he says, "he spends his money. We never have any trouble with Cadillacs—sell about five a month, besides used ones."



CATTLE EXPERTS William Lewis, stockyard president; T. N. Hayter, banker; Les Harding, market commentator, don't look for enough shift to elect a Democrat. Says Hayter: "No matter what happens to crops, it will be hard to beat Republicans."



CANDIDATE Dennis Jensen of Spencer, S. D., is a Democrat running for the state senate. He's afraid the new farm law will cut down demand in his plumbing and heating business. He's in Sioux Falls for the Democratic get-together (turn the page).



FARMERS SHED COATS as they crowd, 300 strong, into a steaming auditorium to hear the Democratic speakers pour it on Agriculture Secy. Ezra Benson.



STEVENSON winds up the rally, attacking Eisenhower for breaking campaign pledges.

Farmers and Democrats

(Continued from page 31)

Democratic prospects looked somewhat bleak in Sioux Falls, S. D., last week. Sioux Falls was an important place because it was there that the Democrats chose to start their campaign for the fall Congressional elections.

Farm policy, as is traditional, was the starting issue. The Democrats spoke their piece at a big political meeting timed to match the Sioux Empire Fair last weekend. They were trying to woo back into the Democratic camp the most Republican area of America outside Maine and Vermont.

• **Volleys**—The big guns of agriculture from past Democratic Administrations fired their volleys at the new Administration farm bill. In one of Pres. Eisenhower's major successes of the late Congress, this bill shifted farm price supports away from the rigid 90% of parity guarantee on basic crops that had been Democratic policy since the war years. The Democrats hauled out their 1952 Presidential candidate, Adlai E. Stevenson, to draw 1,100 people from 15 states to a \$10-a-plate fund raising dinner, where they heard the Democrats lay into Eisenhower more vigorously than at any time since the 1952 campaign.

Falling farm prices, particularly on beef, and the overhanging threat of a reduction next year in the price supports on wheat and corn were dinned in the ears of the farmers. Shifting policy on public power, on rural electrification appropriations, and on organization of local membership on Agriculture Adjustment Administration farmer committees were attacked, too.

• **Consensus**—All the same, sentiment

at the meeting, and at the adjacent Sioux Empire Fair where cattle and hogs vied for blue ribbons could be summed up about like this:

The Republicans will hold their ground in the Midwest, though harder put to win than they were with the vote-pulling Eisenhower in 1952. The Democrats are improving their organization, particularly in South Dakota where there has been a Democratic "drought" for more than a decade, but they can't expect to pick up many seats in the House of Representatives or in the Senate.

This was apparent to anyone who walked around the streets and the fair-ground buttonholing farmers and men who deal with them (page 30).

Exceptions: Missouri, where drought has hurt, and western South Dakota, where it is starting to. Missouri might deliver the Democrats a seat or two in November but South Dakota still seems to be solid Republican, though there were some boasts from Democrats they would carry the western second district.

• **Tight Spots**—Talking to the farmers who came to the meeting did uncover some local tight spots that Democrats might gain by in November. People from Custer County, S. D., are angry because the White House doesn't think their drought qualifies them as a distress area eligible for such federal help as bargain rates on hay and other feeds for livestock.

Democrats from Rock Island, Ill., reported farm equipment workers are getting restive because of unemployment, and the seat of Rep. Robert Chipfield may be captured.

Iowans were confident that Sen. Guy Gillette will be re-elected in that Re-

publican state, but he usually gets good Republican support as well as Democratic.

Democratic optimism is building up in Colorado for election of another Democrat to replace Sen. Ed Johnson, who is retiring to run for governor. Johnson has made his peace with the New Deal faction in Colorado, and is ready to run in harness with either ex-Rep. John Carroll or Denver's Mayor Quigg Newton.

It adds up to this: Though the Democrats have few places to pick up Congressional seats in the farm belt, they do appear strong enough to save the few they have.

Except for the beef growers, the farmers are doing well in the area, and a lot of them are not depending much on price supports to get their profits. They do have private fears about the next year or two. But the Eisenhower-Benson gamble—that price supports have been oversold as a campaign issue—seems still to be a good one in the Midwest.

• **But in 1956**—Democrats were thinking about long-term prospects, though, as well as short. They never expected to make much progress this year in Iowa, Nebraska, South Dakota, North Dakota, or downstate Illinois. But in 1956, things might be different. They were aiming their campaign at people like Melroy Johnson, a sheep grower at Hartford, S. D., who's "been a Republican all my life" but has voted Democratic since 1932. Johnson says Eisenhower has fallen down on his campaign promises, that the rigid 90% support of his corn has saved him through the years. "I have 7,000 bushels of corn under loan that is worth \$1.49 a bushel to me. I'm going to resell it for another year, and the government will pay me 15¢ a bushel for storing it. I remember when 15¢ was all my corn was worth, and that was under the Republicans."

Is Air Policy Shifting?

Strong faction within Administration is backing old idea of the chosen instrument for U.S. overseas airlines. Fight revolves around cases waiting President's decision.

For the past few months, a behind-the-scenes political fight has been building up in Washington over U.S. policy on the foreign operations of American air carriers. This week the President had under consideration three route and certificate cases that will determine how that fight is to go.

All of the cases—the renewal of Northwest Airlines' North Pacific route, the long-hanging Balboa interchange proposals, and the certification of Seaboard & Western Airlines—have one thing in common. Each involves a clash between the old "chosen instrument" idea, long pushed by Pan American World Airways, and the concept that there should be strong competition in the overseas airline field. The issue is clearer in some of the cases than in others. But it's there in all of them.

• **Receptive**—There's been a growing feeling in Washington lately that the idea of a chosen, or single, U.S. airline to compete abroad with the foreign, government-owned lines has been gaining ground. The recent report to the President on civil air policy by the Air Coordinating Committee leaned toward the chosen instrument policy. It said that while the national interest requires many international routes, we should avoid or eliminate uneconomic duplication of service between U.S. carriers.

The Northwest case—the most bitterly fought of the three now awaiting Eisenhower's decision—has shown that there is considerable support for this chosen instrument policy.

Northwest is seeking renewal of its Seattle-Tokyo route, which it has been operating under a temporary certificate. The immediate issue is this North Pacific route. But tied in, indirectly, is a petition by Trans World Airlines to extend its New York-to-Bombay service into Tokyo. There it would link with Northwest to provide a second round-the-world service—in competition with Pan Am.

• **For Reversal**—The Civil Aeronautics Board voted 3 to 2 to keep Northwest in the Pacific. But top officials—among them Commerce Secy. Sinclair Weeks—have shown a readiness to argue the White House into a reversal.

One of their main points is economy. For instance, Robert Murray, Jr., Under Secretary of Commerce for transportation, holds to the theory that the use of the chosen instrument policy would eliminate the subsidy paid each

year to Northwest for its trans-Pacific operations. Against this, several Republican senators—among them Everett Dirksen of Illinois and Edward Thye of Minnesota—have been leading a fight to preserve Northwest's route.

• **Balboa**—The Balboa case, which involves service between New York and Balboa, C. Z., has been in the air for three years, as it bounced back and forth between CAB and the White House. At issue is a plan for a dual system of interchanges, providing one-plane service from New York to Balboa. The effect would be a second, strong service competing with Pan Am and Panagra (50% owned by Pan Am).

In 1952, CAB sent President Truman a proposal that would join (1) Braniff Airways and Eastern Air Lines and (2) Panagra, Pan American, and National Airlines to provide the service. Truman did nothing with it, and Eisenhower sent the proposal back to the board for review. The board then decided to establish an independent airline by combining Panagra and Braniff's international routes.

This plan failed because the companies couldn't get together. CAB then went back to its original proposal—and this is the one Eisenhower has before him.

• **Seaboard**—The Seaboard & Western case has been back and forth for an even longer time than Balboa. Seaboard, which operates an all-cargo service across the North Atlantic, first filed for certification as a nonsubsidized freight carrier in 1947. Its petition, opposed by both Pan Am and TWA, was voted down by CAB in February, 1951, although the order wasn't published until May of the following year.

In June, 1952, Seaboard filed for reconsideration of its case, and Truman ordered the matter reopened. Not until early this year, however, did the trial examiner bring in his report—recommending that the line be certified. Although CAB has not given any official sign of how it acted, Aviation Week, a McGraw-Hill magazine, has reported that it voted 3 to 2 in favor of certification.

Last week, after seven years of waiting, Seaboard sent a direct appeal to the President to act. In an open letter that appeared in several newspapers—among them the Rocky Mountain News and the Denver Post—Seaboard asked the vacationing President to up-

hold the free enterprise system and grant Seaboard's certification. Meanwhile, there were signs that new support was building up for its case—mainly among Republicans who feel a turn-down might give the Democrats welcome campaign ammunition.



Hollywood Takes a Spin

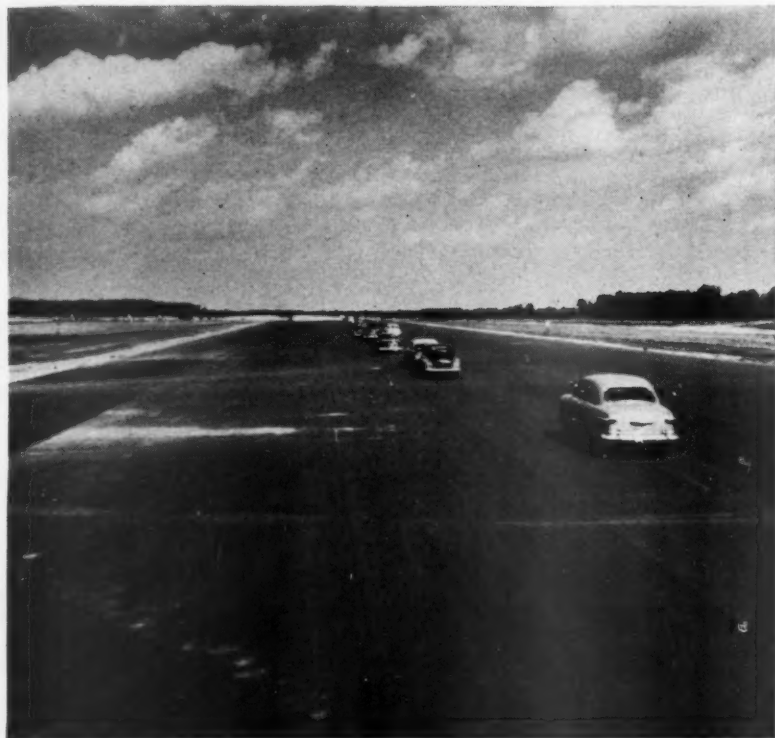


Buffalo Trucks Go Up

In Hollywood, Capitol Records has just O.K.'d plans for a new \$2-million building that will go round and round (top) and come out 13 stories high. According to Capitol, it will be the world's first round office building.

In Buffalo, trucks go up and down as workmen hit upon a novel idea for carting away debris from the roof of the New York Telephone Building. A crane lifts a truck six stories to the roof for loading (bottom), then lowers truck back to street. The company is adding a seventh story.

Airport Invites the Owners In



RUMORS that Toledo's new airport was inadequate and the facilities faulty prompted the contractors to invite city motorists to come out and inspect things for themselves.



MORE THAN 15,000 persons accepted, and in the two-day period at least 4,000 cars poked around the 5,200-ft. runways and 300-ft.-wide ramps in a five-mile conducted tour.

During a hearing by a House Appropriations Subcommittee last July, a witness testified that the new express airport under construction in Toledo would be inadequate because it was being built with local funds only, the runways were too short, plane parking ramps were faulty, and asphalt areas would melt under a hot sun.

Two days later, the same witness retracted his remarks and apologized to Toledo. He admitted that his comments were without foundation. The incident was quickly forgotten elsewhere, but in Toledo it honed the interest of taxpayers in just what kind of airport they were getting. After all, the \$3.9-million project was being financed by city money, most of it coming from revenue from the city's 1% payroll tax.

Last weekend, S. E. Johnson Co., which built the airport, decided to let the taxpayers inspect their purchase first hand. Lured on by seven-column, half-page ads, news stories, and radio plugs, Toledo motorists were invited to drive their cars all over the runways, taxiways, and ramps of the 1,000-acre airport.

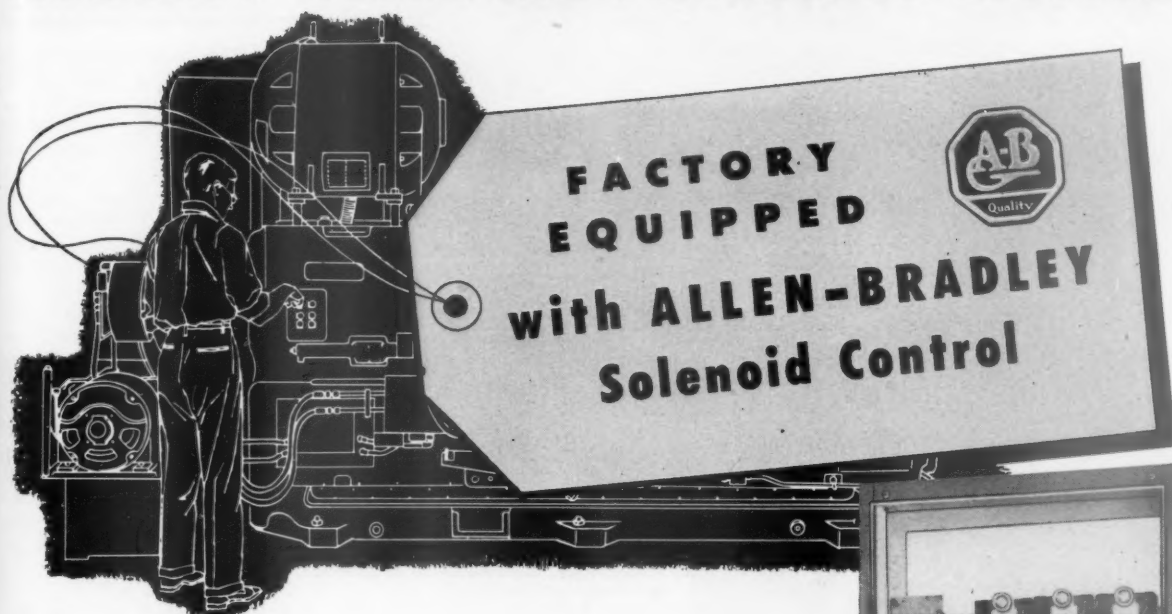
• **Everybody Came**—More than 15,000 persons promptly accepted. In the two days the runways were opened to the public, more than 4,000 cars, motorcycles, bicycles, trucks, and one 1913 Model T Ford investigated every runway and ramp. Local police estimated that in the four-hour period of Sunday afternoon, drivers poured onto the airport at the rate of about 600 cars an hour.

At its peak, the rush of cars caused traffic tie-ups of nearly half a mile at the airport entrance. At times, the rush of traffic turning off highways into the airport was so great that it carried many a startled motorist onto the runways. One driver leaned out of the window of a car carrying Michigan plates and loaded with luggage and family to ask, "Is this the way to Toledo?"

A lady driver swerved suddenly off a runway and sped over to the airport terminal building, to ask a policeman if it were illegal for her to skip the rest of the airport tour. "I don't know how I got in here," she said, "I wanted to continue down Route 2."

• **Barfly**—In spite of the confusion, however, Toledoans found out that their new airport is all they have been led to believe. If there is one fly, it's in the fact that the airport may not have a bar. In Ohio, there are only a certain number of liquor licenses issued, and a newcomer has to wait until his number comes up. There's a long list ahead of the airport.

MOREY SEMI-AUTOMATIC LATHE

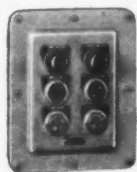


This lathe is used for rough turning of eight-inch shells—a production job—and requires reliable motor controls. That is why Allen-Bradley units were chosen.

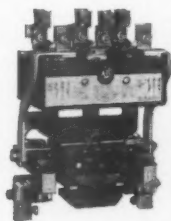
The simplicity of Allen-Bradley solenoid controls—only one moving part—and their 20 years' record of top performance in all varieties of service . . . is your guarantee of millions of trouble free control operations. An electrician's dream is the double break, silver alloy contacts which require no maintenance. For safety to motors, men, and machines, two dependable relays per motor starter provide overload protection.

Allen-Bradley's experienced application engineers are ready to serve you. Let's get together. Anyway, for dependable control, specify Allen-Bradley controls—they're QUALITY!

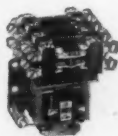
Allen-Bradley Co., 1332 S. Second St., Milwaukee 4, Wis.
In Canada—Allen-Bradley Limited, Galt, Ont.



Oiltight push button assembly used on the Morey lathe.



Bulletin 709, Size 3 Starter. Max Ratings: 100 hp, 220 volts; 200 hp, 440-550 volts.

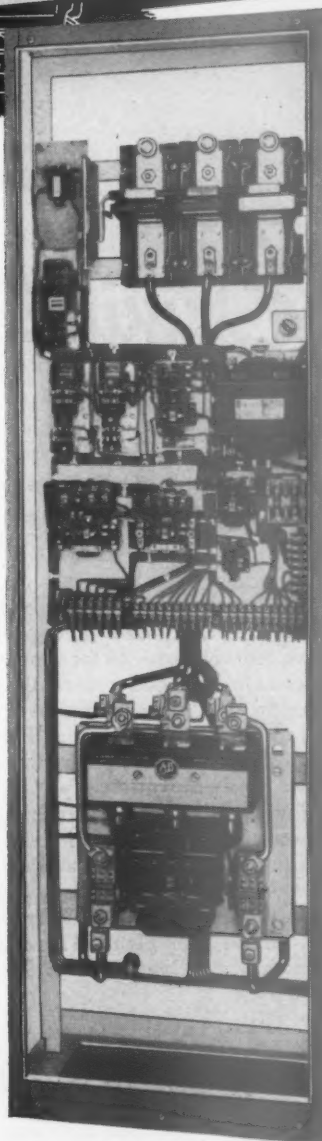


Bulletin 700 4 Pole Universal Relay with NO & NC contacts.



Pneumatic Timer. Range 1/6 sec to 3 minutes.

ALLEN-BRADLEY
SOLENOID MOTOR CONTROL
QUALITY



Allen-Bradley special panel used with this Morey lathe.

OSBORN



These six Osborn Sitafo brushes on a rotating head clean the wire thoroughly prior to forming, eliminate film build-up in dies and resultant shutdown for removal of film.

Eliminates downtime



HOW CAN YOU SAVE
WITH AN **OBA**?

THE spade weld screws shown here are made from wire. The problem was to clean the wire prior to forming screws. Former cleaning method caused frequent lengthy shutdowns of press for removal of film build-up in dies. Now, the Osborn Power Brushing setup shown cleans the wire thoroughly, eliminates costly downtime.

Your nearby Osborn Brushing Specialist is constantly helping to make savings like this by studying the cleaning and finishing operations in all kinds of plants and giving a written report with recommendations for improvements. Why not have him make this **Osborn Brushing Analysis** in your plant? There is no obligation. Call or write *The Osborn Manufacturing Company, Dept. A-45, 5401 Hamilton Avenue, Cleveland 14, Ohio.*



Osborn Brushing Analysis

TO HELP YOU DISCOVER HIGHER QUALITY AND LOWER COSTS WITH POWER BRUSHING

BUSINESS BRIEFS

July sales by U.S. manufacturers were valued at \$22.4-billion, a drop of \$2.3-billion from the year-ago month, the Commerce Dept. reports. But after seasonal adjustments the July sales were about up to the June, 1954, level. And the National Assn. of Purchasing Agents reported that August production and orders were better than the "disappointing" month a year ago.

Burlington Mills announces that it has yet to receive a satisfactory offer for the Palm Beach Co., which it hopes to sell (BW—Aug. 21 '54, p. 30). Burlington says it is waiting for "more favorable seasonal factors" to sell the clothing manufacturing company, which it bought along with the parent Goodall-Sanford. Meanwhile A. Sagner's Son, Inc., says its bid for Palm Beach still holds, and it hopes the deal will go through.

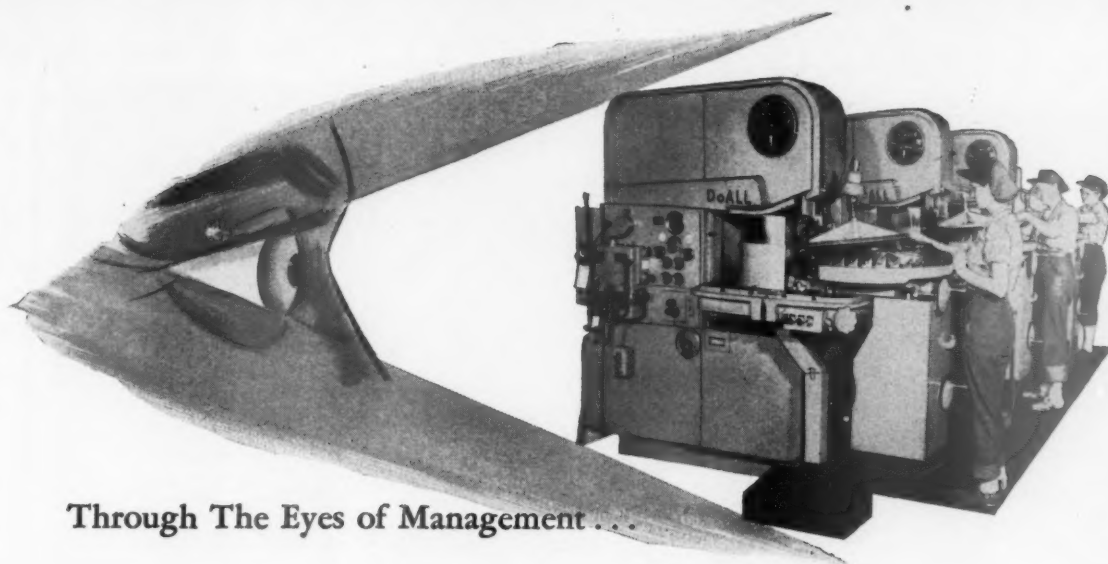
First fruits: The merger of Nash and Hudson into American Motors Corp. showed its first tangible marketing result this week when Hudson dealers began handling the Nash International. The small English-built car first went on the market last spring.

U.S. commercial exports for July topped the \$1-billion mark, rising \$63-million above the 1953 month, says the Commerce Dept. Imports for the month were \$832-million, down \$76-million in a year. Meanwhile, the Agriculture Dept. reports that U.S. farm exports for the 12 months ended June 30 were \$2.9-billion, a 4% rise over the previous year.

A \$1,572,234 tab for back taxes has been presented to Cyrus Eaton, Cleveland financier and chairman of the C&O, by the Internal Revenue Service. Eaton is fighting virtually the entire claim, which has been filed in the U.S. Tax Court. IRS says Eaton owes the money for profits made in 1943 on Canadian stock deals.

A tough fiscal 1955 for U.S. shipbuilders is predicted by Joseph McMullen, Maritime Administration official. He says the real effect of a new \$401-million government program won't be felt by the industry until the following year.

Lead and zinc offers were formally sought by the General Services Administration this week, in telegrams to producers. The call sets the seal on the government's stepped up program for stockpiling the metals (BW—Aug. 28 '54, p. 18).



Through The Eyes of Management . . .

The New Concept!

THE vision to create and use new applications of basic principles has always been the key to improved methods and lower costs.

Production band machining is a new cost reducing application of bandsawing, a principle of metal cutting that is as basic as milling, drilling, turning, grinding and shaping and provides greatly extended geometry of cutting.

DoALL introduced the band machine as a basic machine tool and has since developed its fundamental cutting advantages to greatly extend the realm of production metal-working by providing a power feed table, a coolant system, variable speeds, increased power, greater

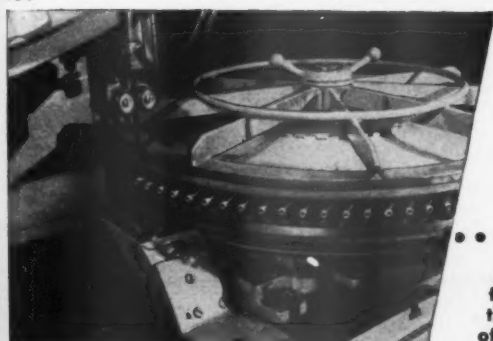
rigidity and improved saw bands that cut up to 5 times faster and last up to 30 times longer.

Such operations as slotting, splitting, notching, contour cutting, angle cutting and many other jobs can be done on DoALL band machines at $\frac{1}{3}$ to $\frac{1}{2}$ the cost of doing them on other machines. The more costly machines are thus freed for work they can do best.

The capital investment in band machines is less than other production machine tools, cutting is faster, tool costs lower, fixturing simpler, set-up time less. Machine tool accuracy is secured, with excellent finishes. Ask to have a DoALL demonstration truck visit your plant. No obligation. Call your local DoALL Service-Store, or write: **The DoALL Co., Des Plaines, Ill.**

Free on request,
New Wall Chart,
"How Basic Tools
Created Civilization".

PB-7



Trimming jet turbine blades automatically on a band machine. A power-driven rotating fixture feeds the work into the saw blade.



DoALL band machines, saw bands, precision surface grinders, granite surface plates, tool steel and precision measuring instruments are available through 38 DoALL Sales-Service Stores which also stock a complete inventory of cutting tools such as taps, reamers, twist drills, cutters and single point tools.



A TRAINED EYE GAVE HIM A BETTER HIP

An accident on the job fractured his left hip. Attending physicians estimated he would have nearly complete loss of its function. That's a bad blow for a man who works on his feet, and an expensive claim for his employer.

Liberty Mutual does not give up easily on such a case. It was referred to a Medical Advisor, one of a group of eminent orthopedists retained to study difficult cases. After examining the reports and the X-rays he gave valuable advice to the treating physician. This led to the corrective surgery shown above. Disability was greatly reduced. The man is able to work again.

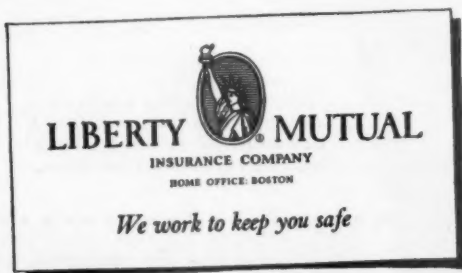
Top surgical talent for problem cases is only one phase of Liberty Mutual's

Humanics program. Humanics begins with the *prevention* of accidents through Industrial Engineering, Industrial Hygiene, and Industrial Preventive Medicine. If an accident happens, the program works to

reduce loss through good Claims Medical Service, backed up by Medical Advisors — and Rehabilitation of the badly injured.

Humanics reduces both the human and financial cost of accidents. It protects the worker from suffering and his family from the loss of his earnings. For the employer, it cuts the cost of Workman's Compensation insurance, boosts plant morale and improves production.

For facts and figures on what Humanics has done for businesses like yours, just call the nearest Liberty Mutual office. Look in your phone book for the number. Or write to Liberty Mutual, 175 Berkeley Street, Boston 17, Massachusetts.



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WASHINGTON OUTLOOK

WASHINGTON
BUREAU
SEPT. 4, 1954



Revised budget estimates for 1955 will be out shortly—new figuring on revenue, expenditures, and the deficit for the 12-months ending next June 30. They will make headline news for businessmen. The prospect:

Spending will be down. Eisenhower's January estimate of \$65.6-billion will be cut. Best guess is that expenditures will be \$2-billion to \$3-billion less, though the review may not show the full cut.

Revenue estimates will be down, too. In January, Eisenhower figured tax receipts at \$62.7-billion. Since then, Congress cut excises \$1.2-billion. Business softness may cut receipts as much as \$2-billion more.

A higher than expected deficit is indicated. Instead of the \$3.3-billion forecast in January, it may well go over \$4-billion.

—•—
A word of caution, due to politics involved: There's a lively debate within the Administration on just how far the budget revision should go. A full reflection in the budget review of official budget-cutting hopes could have repercussions both at home and abroad. The biggest saving will come in defense. On the revenue side, a sharp drop would be embarrassing, and would forecast a bigger deficit. Since the review will be based on estimates only, there's pressure to keep changes moderate, thus avoid a backfire.

—•—
Fast amortization for defense plant modernizations is out. The decision finally has been made by the Interagency Defense Mobilization Board.

Idea was to keep arms-making facilities up to date, by allowing a fast tax write-off on replacement machinery and equipment.

Considerations behind the "No" decisions: (1) Output expansion has been the aim of fast amortization from the start, and modernization doesn't fit into this pattern; (2) dispersal of defense facilities still is a major goal. Tax benefits for modernization would tend to hold defense facilities in critical targets areas.

—•—
"Hard-to-fill-jobs" now are easier to fill. As the Labor Dept. defines them, these are professional and managerial (engineers, teachers, nurses), clerical and sales (stenographers and typists), and skilled jobs (machinists, tool makers and die makers, draftsmen). These are the jobs that can't be filled from the rolls of local U. S. employment offices. In August last year, the total number of these openings was 36,000. This August, it dropped to 15,000. It's part of the trend. A year ago, there were five labor shortage areas—none today.

—•—
Eisenhower may have trouble with two TVA board members—Vice-Chmn. Dr. Curtis and member Paty, both Democratic holdovers.

It's part of the squabble over the Dixon-Yates contract, under which private power producers will pump 650,000 kw. into TVA as a replacement for power that TVA delivers to AEC. Democrats are making an issue of the plan. And Curtis and Paty are demanding "clarifications."

Eisenhower can fire the dissenters, if he wishes. Roosevelt set the precedent 16 years ago, when he ousted A. E. Morgan, who refused to go along with the President's policies.

—•—
Private power will be quick to use the atom as fuel, officials expect. This doesn't mean the atom will be pushing at your power switch tomorrow. Commercial use still is some time away. But here's how Washington figures:

WASHINGTON OUTLOOK (Continued)

WASHINGTON
BUREAU
SEPT. 4, 1954

Private power was slow to develop water sources. So, government moved in—TVA, Columbia River, etc. Private power now is alert to the danger of government competition, so will move fast when the time comes.

Contractors and home appliance manufacturers will want to watch for the new Commerce Dept. report on how much homeowners spend for improvements and repairs. It's due within the month—a new census study.

Business and sales are involved. It's the first official breakdown on what homeowners spend.

If you want details on easing of trade bans with the Reds, you should write Office of Publications, Commerce Dept., Washington 25. Ask for "Current Export Bulletin No. 736—supplement to Comprehensive Export Schedule." The price, 25¢. Nearly 750 items are involved.

State lobbying is big business in Washington—splitting of melons on various aid programs and the getting of contracts for local companies. Many states have full-time offices here—New York and California for example.

Michigan is setting up a new office. Democratic Gov. Williams, known as Soapy, is burning. While his state lost \$300-million of orders in recent months, firms in New York and California landed \$1-billion. Michigan, which had an office here early in the Korean War, is reopening.

Agriculture Secy. Benson will soften tough farm controls. He won out in the fight for flexibility—a victory that may cost some farm votes. Now the GOP politicians are pushing him to relax a bit on his plans to make production controls rugged. There are lots of hints he will relent a bit on cross compliance—let a wheat grower fudge a little on corn, for example, and still qualify for price support loans.

Democrats are being cautious about predicting a farm "revolt." The Sioux Falls rally was right on the GOP home ground, and few Democrats are making brash claims (page 30).

The party policy will be a campaign for 90% supports. Farmers like the idea. But farmers in the Corn Belt are having a good year and are slow to rise to the bait. They see some shift in votes, but not significant.

Note Adlai Stevenson's behavior. He deplored Eisenhower's shift to flexible supports at this time. But he stopped short of backing 90% price props as a permanent policy for the Democrats. That put him out of step.

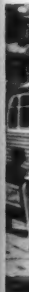
Texas' Democratic primary runoff pleased Eisenhower. Gov. Shivers romped home—a third term—after bolting to Eisenhower in 1952, and over strong union opposition.

But there was embarrassment to the GOP in Texas. Eisenhower was quick to offer congratulations to Shivers and, apparently, forgot the fact that a Republican will oppose Shivers in November.

Germany will be armed as an anti-Red ally. This seems pretty sure, now that France has killed EDC (page 27). The plan will be to reestablish sovereignty, and permit a West German army. The cost to the U. S. may be higher than under the EDC program. But it won't make any big budget bulge soon.



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A PROGRESSIVE AMERICAN INDUSTRY—TRANSPORTATION—SHOWS YOU WHY

All America is travelling light!



1. THIS HEAVY-DUTY TRUCK weighs 2200 pounds less than an all-steel truck—because it's made of light, strong Kaiser Aluminum. Thus it can carry 2750 more board feet per day—an extra payload that's equal to an extra one-third truck load.



2. THIS TRUCK TANK is all aluminum, which greatly boosts payload and lowers operating costs. New construction techniques, developed by Kaiser Aluminum engineers, added strength, durability, sharply reduced fabricating costs.



3. WITH SMALL TRUCKS, an important factor is operating costs. By eliminating dead weight, light, strong Kaiser Aluminum saves on fuel, reduces wear on tires, motors, brakes, parts. No paint needed—and aluminum is sanitary, won't rust.



4. SEMI-TRAILERS like this, built with light, strong Kaiser Aluminum, weigh an average of two tons less than those with steel bodies, can carry far more cargo. Maintenance costs are lower. And repairs are made quickly, easily, economically.



5. BUSES built of light, strong Kaiser Aluminum get rid of as much as 5,000 pounds of profit-robbing dead weight. The result is a light weight, heavy-duty vehicle that brings extra profits to operators through savings on power, tires, maintenance.



6. AUTOMOBILES are making greater use of aluminum for such parts as pistons, engine accessories and automatic transmissions. More and more manufacturers plan new uses of aluminum because it saves weight, increases power, cuts costs.



7. HOUSE TRAILERS built with Kaiser Aluminum eliminate needless dead weight, reducing tire and engine wear, cutting fuel costs. Maintenance problems on your trailer practically disappear. It's beauty can't be marred by rust streaks.

THE HIGHWAY TRANSPORTATION INDUSTRY has contributed greatly to our daily comfort and convenience through the construction of vehicles and equipment that are dependable, efficient and economical.

Evidence of this industry's progressive outlook is the increasing use of aluminum in transportation units. For aluminum provides a combination of advantages that no other material can match, including light weight, strength, corrosion resistance, economy.

We have aided in the growth of the transportation in-

dustry by expanding our production capacity to almost 30% of all the primary aluminum made in this country.

As a basic producer of aluminum, we do not make any of the products shown here. Instead, our efforts are put behind the job of serving manufacturers—to help improve their products and reduce costs.

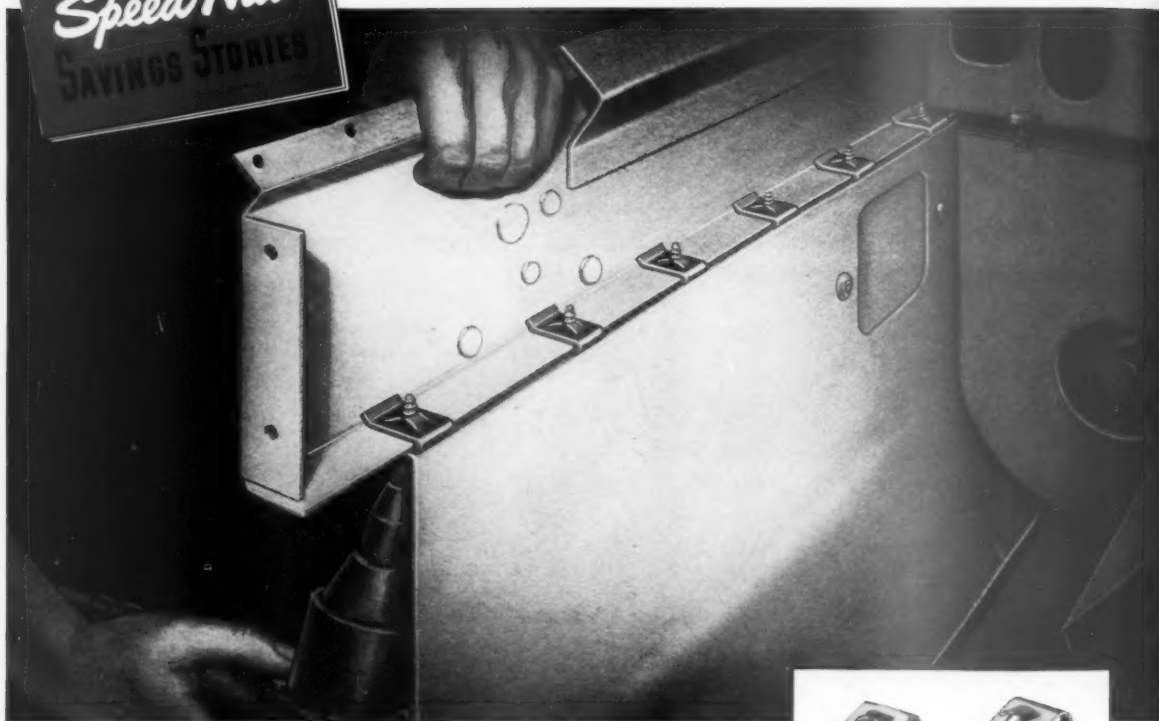
If you want more information about our customers' products, write: Consumer Service Division, Kaiser Aluminum & Chemical Corporation, Oakland 12, California.

Setting the pace—in growth, quality and service

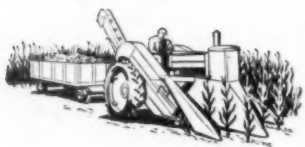
Kaiser Aluminum



FASTEST THING IN FASTENINGS®



JOHN DEERE harvests 3-way savings!



Everybody reaps the benefits of John Deere's fastener engineering on their new No. 227 Corn Picker. The farmer saves maintenance hours . . . the dealer makes fewer service calls . . . and

John Deere cuts assembly costs 50%!

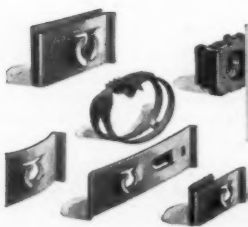
This triple play resulted from John Deere's six years of field testing and research into fastening methods. Studies proved that rugged, self-retaining SPEED NUTS provide the simplest, fastest, most secure attachments, and make servicing far simpler.

Similar savings and advantages can be yours. See your Tinnerman representative for details on our free Fastening Analysis Service.



Self-retaining "U" and "J" Type SPEED NUTS hold themselves in screw-receiving positions for blind-location assembly. John Deere uses sturdy 14Z sheet metal screws, power-drives them into nuts—no pre-assembling! SPEED NUTS can't freeze on threads—screws are always easy to remove for servicing.

Write for your copy of "SAVINGS STORIES"—a volume filled with fastening ideas. TINNERMAN PRODUCTS, INC., Dept. 12, Box 6688, Cleveland 1, Ohio. In Canada: Dominion Fasteners Ltd., Hamilton, Ontario. In Great Britain: Simmonds Aerocessories, Ltd., Treforest, Wales. In France: Aerocessoires Simmonds, S. A., 7 rue Henri Barbusse, Levallois (Seine).



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Speed Nuts®

MORE THAN 8000 SHAPES AND SIZES





L. L. COLBERT, 49-year-old president of Chrysler Corp., took the union into his confidence in a bid for better labor relations. It's part of a general . . .

Turnabout at Chrysler

Other auto companies have long had more harmony with United Auto Workers. Now Colbert is trying to create a new climate that should help Chrysler's competitive position.

One day last week, L. L. Colbert (above), president of Chrysler Corp., left his office on a bold mission: to lay Chrysler's cards on the table before United Auto Workers (CIO) policy-makers, face to face, and to ask for their cooperation in improving his company's competitive position.

Kaiser-Willys, Studebaker, and—most recently—American Motors already had asked UAW for production concessions, and found the auto union sympathetic. At Studebaker, UAW leaders plugged for, and workers agreed to, a wage readjustment costing about 30¢ an hour.

So Colbert's mission wasn't without precedent this year in the industry; the one big difference in the Colbert-initiated appearance before UAW and those of other auto manufacturers was to be found in the background of labor relations in his company.

• **Old Sores**—Chrysler and UAW have had a tumultuous relationship. By no stretch of imagination can it be described as amicable and cooperative like, for instance, the Kaiser-Willys and Studebaker relations with the union.

The auto union struck Chrysler for 103 days in 1950. UAW officials still charge that the corporation hoped at that time to weaken the union by driving a wedge between its president, Walter Reuther, and his Chrysler membership. The bitterness of the strike lingered after the auto industry's agree-

ment on long-term "escalator" contracts. Under the new contract, General Motors and UAW got along in an atmosphere of cooperation and goodwill, but relations between Chrysler and the union continued to be rough.

• **Change of Guard**—Chrysler top leadership changed several years ago. Executives whom UAW blamed for the bitterness of the 1950 strike went out, and Colbert's regime moved in. As one of his first moves as president, Colbert paid Reuther a visit and outlined his plans for a new and friendlier era.

The first visit led to others, but—although Reuther and other UAW leaders regard Colbert highly as an amiable and forthright executive—the visits didn't seem to help Chrysler-UAW relations. To UAW, despite Chrysler denials, the old and distrusted corporation leadership appeared to be still in a position to influence operations and policy. One UAW spokesman summed it up by saying, "I wish Colbert was really president of Chrysler."

• **Grievances Pile Up**—As a result, despite Colbert's efforts, labor troubles have continued at Chrysler. A long series of wildcat stoppages and controversies have plagued the plants since then.

In addition, grievances have been piling up this year. According to UAW, regular contract grievance machinery

"hasn't been able to settle a grievance in six months; everything goes to the umpire." What's more, Chrysler has had heavy layoffs in the last half-year, and is shutting down now for the longest changeover period since before the war. So Chrysler-UAW relations were at a pretty low point when Colbert decided, a week or so ago, to make a new, direct approach to the union.

• **Into a Buzz Saw**—UAW's National Chrysler Council was scheduled for a routine meeting at a downtown Detroit hotel. Union leaders from Chrysler plants all over the country were to be there to discuss union and collective-bargaining matters behind closed doors. Colbert requested permission to speak.

With so many grievances rankling in Chrysler locals, Colbert risked a bad time. One UAW man said the Chrysler president took a chance "of running into a buzz saw."

• **Pep Talk**—What went on when Colbert faced his UAW audience has never been fully revealed. For publication, Chrysler and the union merely agree that Colbert told the plant leaders about Chrysler's 1955 automobiles and, in detail, about the corporation's plans for pushing the new models in a strong competitive bid for a bigger share of the market (BW—Aug. 14 '54, p26).

The parties also agree that Colbert did not (1) ask workers to consider a pay cut, (2) propose any changes in production standards; or (3) discuss any collective-bargaining issues. His talk, they say, was "just a pep talk" to appeal to workers for help in getting a large and steady production.

• **Amity Aims**—What Colbert would like from UAW obviously is the firm but friendly cooperation the union gives GM, and the reverse is just as true. UAW would like an end to tense relations in Chrysler, which are bad any time but particularly so in the current period of heavy layoffs, when labor-management problems multiply.

Will the Colbert appearance before the UAW group bring about the jointly desired new era of friendlier relations? The answer to that won't come quickly; too many factors are involved. But along with skepticism in UAW after Colbert's talk there was fresh optimism about "a change in Chrysler" that means "things should get better," UAW Chrysler people say.

UAW leaders are inclined to regard Colbert's appearance at the National Chrysler Council meeting as a sign that he is getting a free hand in resolving Chrysler problems. If his views—not influenced by any predecessors in leadership—are to prevail, say UAW people, it will mean smoother relations between auto maker and auto union.

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The South Carolina State Development Board maintains a complete staff of competent research men, engineers, and industrial specialists, solely to conduct investigations of all possible plant sites in South Carolina. They are equipped to give you all information including topographical, highway, transportation, power and utility maps; data sheets on cities, counties, sites, labor, climate, taxes and government. You can have factual information on any industrial site in the state—from one source.

Providing assistance to new industry is one of the primary jobs of the Development Board. In addition to factual information, the Board offers other personal services to help prospective plants locate favorably.

All replies in strict confidence, of course.

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South Carolina
STATE DEVELOPMENT BOARD

How Social Se

- They bring 10-million more persons under federal coverage.
- They raise benefits for everyone.

In strictly human terms, the federal pension legislation enacted during this past session of Congress represents the most significant victory of this Administration.

The legislation, which Pres. Eisenhower called "the cornerstone of the government's program to promote the security of the individual," expands the social security system, enacted in 1935, to give the protection of old-age pensions and survivors insurance to 10-million more Americans, most of them farmers.

Administration recommendations for higher benefits and taxes are followed almost to the letter. The legislation raises monthly benefits by at least \$5 for single retired workers and by as much as \$31.25 for some families. The new tax increases under the law range up to \$12 a year for employers (matched by employees) and \$18 for the self-employed.

Beginning this month—significantly just before the Congressional election—the 6.3-million persons who now get old-age and survivors benefits will get an average of \$6 more in their monthly checks. And under another provision retired workers will be able to earn as much as \$1,200 a year in covered employment without losing any of their benefits.

• **Broadened**—In all, social security coverage is now broadened to include about 3.6-million farm operators, along with accountants, architects, engineers, and funeral directors. Clergymen and Christian Science practitioners can join the system by their own individual option.

Also included are 2-million farm employees, 150,000 federal workers, 250,000 household domestics, 100,000 industrial employees who work at home, and 50,000 fishermen. About 3.5-million state and local employees, exclusive of police and firemen, will now be eligible for coverage at the option of their employers if a majority of these employees in a governmental unit votes for it.

Newly retired workers will start earning retirement credits next Jan. 1. But the first payments of social security taxes will not be due for the self-employed until Apr. 15, 1956. They are to be paid annually at the same time individual income tax returns are due.

Security Law Liberalizes Pensions

Here are the six outstanding changes included in the new legislation:

It will provide pensions for:

- Self-employed farm operators with annual net earnings of \$400 or more (3.6-million).
- State and local government employees not covered by retirement systems, excluding policemen and firemen (3.5-million).
- Farm workers paid at least \$100 in wages a year (1-million).
- Domestic workers paid \$50 in wages a calendar quarter (250,000).
- Ministers, Christian Science practitioners, and members of religious orders who elect coverage (250,000).
- Civilian employees of federal government not covered by staff retirement systems (150,000).
- Self-employed architects, engineers, accountants, and funeral directors (100,000).
- U.S. citizens employed outside the U.S. by foreign subsidiaries of U.S. companies (100,000).
- Home workers not subject to state licensing laws who were formerly excluded from coverage (100,000).
- Commercial fishermen on vessels of 10 net tons or less (50,000).
- American citizens employed by Americans on vessels or aircraft of foreign registry (a very small number).

1 BROADER COVERAGE

2 HIGHER INCOME CREDITS

Up to five years of beneficiary's lowest earnings will be dropped in computing the average monthly wage that determines his benefits. This way, years during which earnings are low — due to sickness or unemployment — won't affect benefits. The old law had no such "drop-off" provision.

3 HIGHER BASE

Total annual earnings on which benefits and contributions are based is raised from \$3,600 to \$4,200. This is to keep benefits in line with higher wages and living costs.

4 INCREASED BENEFITS

More than 6.5-million now on benefit rolls will get an average increase of \$6 a month starting this month. There are proportionate increases for dependents and survivors. Minimum monthly benefit for a retired worker is raised from \$25 to \$30. Beneficiaries with the present maximum of \$85-a-month will get \$98.50. Maximum monthly family benefit of \$168.75 becomes \$200.

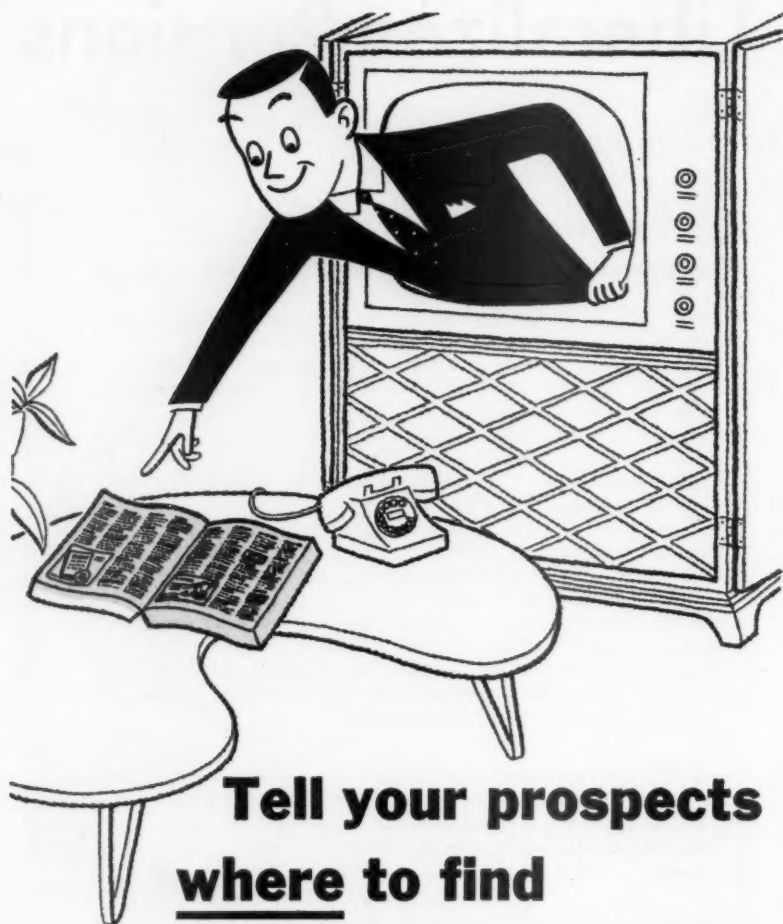
5 SUPPLEMENTARY EARNINGS

A beneficiary can earn as much as \$1,200 in a year without loss of benefits. Under the old law it was \$900. This way, retired persons can supplement benefits with part-time work. Persons age 72 will now be exempt from limits on earnings. Under the old law, for exemption, beneficiary had to be 75.

6 TOTAL DISABILITY

Periods during which a worker is under extended total disability will be excluded in determining his insured status and the amounts of benefits payable to him. The new law will freeze the worker's wage record at the time of his disability. This freeze provision is analogous to "waiver of premium" commonly used in private insurance. Under the old law, a worker's rights to social security might be impaired or lost entirely if he was not permanently insured by social security and was totally disabled before reaching retirement age. Disabled workers will now be able to take advantage of the five-year "drop-off" of lowest earnings (see above) as well.

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B. F. Goodrich does: *See your B. F. Goodrich retailer . . . for his name and address see the B. F. Goodrich listing in the 'yellow pages' of the telephone directory under "Tires."*

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SCARLETT'S
Central Ohio Distributor For 34 Years,
DuPont Anti-Freeze-Zerone & Zerex.

Annual Wage . . .

. . . isn't in contracts of three unions that aimed for it in 1954—but UAW hasn't dropped "militant" plans.

When collective bargaining demands were drawn up early this year, officers of three CIO unions announced that the guaranteed annual wage would be a major goal in 1954. This week, the third of the three unions—the United Rubber Workers—signed new contracts. In rubber, as in steel and electrical manufacturing, the annual wage wasn't mentioned in settlement terms.

New contracts were signed by URW first with Goodyear Tire & Rubber Co. —to end a 52-day strike—and later with B. F. Goodrich and other companies. They stressed two things: a straight wage hike and a narrowing of geographical differentials in pay.

• **Area Differentials**—The rubber union made a particular issue of the differentials when real bargaining got under way this year—largely because of a trend in recent years to move production out of Akron to lower wage areas. Some of these areas offered average pay 34¢ an hour below the level in Akron.

This proved a big stumbling block in negotiations. Rubber companies resisted demands to eliminate—or at least narrow—area differentials. Companies offered a straight 5¢-an-hour boost in pay; URW demanded a 7½¢ wage hike and 5½¢ an hour to wipe out differentials (BW—Aug. 28 '54, p104).

• **Gradation**—After the longest strike in the history of the industry, and the first nationwide Goodyear tie-up, the parties compromised on both pay and differentials. Goodyear and the union signed for a 6¢ raise for workers in Akron and seven other plant cities, 8¢ for about 2,500 in Gadsden, Ala., and 10¢ for 1,200 in Topeka, Kan.

Goodrich signed after Goodyear, giving workers in Akron and six other plant cities 6¢ raises; those in Tuscaloosa, Ala., 7½¢, and those in Los Angeles and Oaks, Pa., 9¢ an hour.

• **Through the Motions**—The rubber contracts were open only on wages, but URW officials planned to press guaranteed-wage demands despite that (BW—Apr. 10 '54, p166). The United Steelworkers (CIO) was even more determined, in pre-bargaining planning, to win "the establishment of a guaranteed wage along . . . practical and feasible lines" in 1954. And the International Union of Electrical Workers (CIO) was just as insistent—in advance.

USW went through the motions of introducing its GAW demand, and pre-



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senting prepared arguments to support it, before tabling the demand for another year. James B. Carey, president of IUE, hardly got around to IUE's GAW demand before running into a flat General Electric rejection of "private supplementation of . . . employer-financed state unemployment compensation—which unions continue to label the 'guaranteed annual wage.'"

• **Wait Till Next Year**—The fate of the three guaranteed annual wage demands this year leads to a question in business circles about what the United Auto Workers (CIO) intends to do about its annual-wage drive, scheduled for 1955. Emil Mazey, UAW secretary-treasurer, said bluntly at a union conference a couple of weeks ago that regardless of the failures of 1954, and no matter what economic conditions are in 1955, UAW's annual-wage position will "definitely be militant."

The auto union hasn't changed its ideas at all, Mazey said, and doesn't intend to. A wage-policy conference in Detroit this November will outline strategy for pressing a GAW demand next May.

ILA's Grip Confirmed On New York Docks

The International Longshoremen's Assn., ousted by AFL on charges that it was racket-ridden and corrupt, has won at least a temporary victory on New York's turbulent waterfront. The National Labor Relations Board last weekend certified it as exclusive bargaining agent for 25,000 dockworkers, and ended for a year—possibly two—AFL hopes for jurisdiction in the port.

ILA led a new AFL dock union—now the International Brotherhood of Longshoremen—9,407 to 9,144 in a representation election last May 26, but 666 challenged votes left the final outcome of the voting up in the air. Last week, in a strategy move, ILA conceded that one block of 491 votes challenged by AFL should be tossed out. When NLRB discarded them, it ruled that since the remaining 175 challenged votes couldn't alter ILA's victory, even if all went to AFL, the ousted union should be certified.

ILA, which has a "reform" leadership now under Capt. William F. Bradley, successor to Joseph Ryan, this week went into negotiations with the New York Shipping Assn., aiming at a quick settlement on a contract to replace one that expired Sept. 30, 1953.

The term of a new agreement will be the key to when a new ILA-IBL (AFL) vote test can come. Under NLRB rules, a certified union is safe from a new election for the term of a contract running up to two years.

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BRANCHES
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CITIES

PIONEERING



Born and technically educated in Sweden, Elis Olsson came to this country in 1906 and found employment as a helper in a book paper mill at 13½ cents an hour. He soon gained a reputation for his ability to lick troubles and improve production processes. Various mills sought his services and he rose steadily. He had a major part in introducing to this country and developing the sulphate or so-called Kraft process of making pulp. Becoming interested in the possibilities of making pulp from cheap Southern woods, he persuaded others in 1918 to join him in organizing The Chesapeake Corporation which leased and later bought the properties of The Chesapeake Pulp & Paper Company at West Point, Va. He became vice president of Chesapeake in 1921, president in 1939 and board chairman in 1945. The country of his birth recognized his achievements by making him a Knight of the Royal Order of Vasa in 1939 and Commander, 2nd Class, of the Order in 1947.



Mill of The Chesapeake Corporation, West Point, Virginia.

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PULPMAKER

ELIS OLSSON, Board Chairman of The Chesapeake Corporation of Virginia, is one of the true contemporary pioneers of the pulp and paper industry. Mr. Olsson has been contributing to advancement in the art of pulp making for nearly half a century.

Under his able leadership, The Chesapeake Corporation has multiplied its pulp capacity nearly 40 times. This has necessitated the continuing purchase of equipment—frequently involving new methods and new designs.

Combustion is proud that, so many times over the years, this outstanding leader in his field has turned to equipment developed by the C-E organization in order to find a better solution to his problems.

Here, then, are some examples of what happens when a true pioneer seeks new and better ways of doing things.

RECOVERING CHEMICALS THE MODERN WAY. "Black liquor," a liquid residue of the pulp making process, contains valuable chemicals that can be recovered and returned to the mill for re-use.

Combustion pioneered in the development of equipment designed not only to recover the maximum amount of valuable chemicals from the black liquor but at the same time to utilize the heat released in the process to produce substantial quantities of steam. In 1939, Chesapeake, through Mr. Olsson, bought a C-E Recovery Unit—the first of its design.

Despite a cost of several hundred thousand dollars, this equipment paid for itself in *less than two years*. It is credited with saving 75 tons of coal and 60 tons of chemicals *every day*. A duplicate unit, ordered in 1946, is performing equally well.

HOW TO BURN BARK IN MID-AIR. Bark and wood chips pile up in a pulp mill at a tremendous rate and must be disposed of if the mill is not to be buried under its own refuse. Customarily they are fed into the great furnaces of the mills' boilers to help produce steam. But common methods of burning are inefficient and involve operating difficulties.

In 1949, Mr. Olsson, who had bought C-E Boilers as early as 1933, turned to Combustion for a better answer to this burning problem. And Combustion had it—a boiler unit designed specifically to burn cellulose fuels. The bark is introduced into the furnace about fifteen feet above the grate level, where it enters a zone of highly turbulent, preheated air. Most of the bark is burned in mid-air, as it were; the small remaining portion burns quickly and evenly on the

grate. Mr. Olsson found this method of bark burning to be far superior to previous methods, and it is now being widely adopted in other mills.

PRE-DRYING LIME SAVES BUYING NEW KILN. Lime is used by the carload at Chesapeake for producing wood pulp. Having been used once, it is dried and recalcined in a kiln. In this way, it can be used again and again, the quantity of new lime required in each cycle being relatively small.

As Chesapeake's capacity increased, lime requirements increased correspondingly. A new kiln seemed indicated. This would have been a costly solution, however, since, in addition to the kiln itself, new building construction would have been required. Moreover, there was inadequate space at the immediate site.

Combustion, learning of the problem, suggested to Mr. Olsson that, since much of the working area of the kiln was used for drying the recirculating lime, its capacity could be greatly increased if the lime were dried before entry into the kiln. The C-E Raymond Flash Drying System could readily fit into the space available. Hot gas leaving the kiln itself could serve as a source of heat for evaporation.

The Flash Dryer was installed. As a result, kiln capacity was increased 40%... fuel consumption per ton of lime dropped 38%, and make-up lime per ton of pulp was reduced 37%. The total cost of the Flash Dryer was *less than half that of a new kiln*.

WHEN PIONEERS GET TOGETHER. Greatly to Mr. Olsson's credit are the foresight and courage that have made his Chesapeake Corporation one of the most successful mills in the country. He not only looked beyond accepted practice in his search for better answers to his problems but he instilled this attitude in his associates and suppliers. And, just as important, he was willing to take the financial risks involved in investing his money in new methods and equipment.

That Combustion, too, has been a successful pioneer is attested to by a long list of C-E contributions to advancement in steam generation and other fields. But pioneering is a two-way street for the equipment manufacturer. He must find an Elis Olsson who is willing to share the risks of trying out new ideas.

Combustion therefore is glad to take this opportunity to say "thanks" to Mr. Olsson and The Chesapeake Corporation for a long and mutually beneficial association...in short, for the good things that result "when Pioneers get together."



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ARTHUR GOLDBERG, legal chief of CIO, works for feuding clients: CIO's Reuther, and USW's McDonald.



ALBERT WOLL does AFL's legal work for Pres. George Meany, has to act at same time for Teamsters led by rebellious Dave Beck.

Labor Lawyers Walk a Tightrope

On almost anybody's list of top labor lawyers in the U. S., you would find the names of Arthur Goldberg and Albert Woll. Goldberg is counsel for the CIO and for the CIO's second largest affiliate, the United Steelworkers. Woll represents the AFL and the AFL's largest union, the Teamsters. Both attorneys also head big law firms, which are retained by an impressive number of labor organizations.

• **Top of a Volcano**—At first glance, Goldberg and Woll would seem to be in a very enviable position indeed in their profession. But beneath the surface there's evidence that each of them is getting into what may turn out to be an impossible situation.

Behind the organizational titles of Goldberg's two biggest clients, the dominant personalities are CIO Pres. Walter Reuther and David McDonald of the Steelworkers. That these two men have drifted into a position approaching open enmity is now well known. Matching this cleavage almost precisely is the strained relationship existing between AFL head George Meany and the Teamsters' Dave Beck, who happen to dominate Woll's two largest and most important clients.

So far, Goldberg and Woll have managed to avoid the consequences of the splits they have to live with. It has taken some fancy footwork, and it illustrates well their resourcefulness and tact. But the Reuther-McDonald and Meany-Beck splits may be developing into actual ruptures. If that does oc-

cur, Goldberg and Woll will almost surely be forced to take sides.

• **Too Many Broths?**—It's really their own talent that has landed Goldberg and Woll in such dilemmas. Both are sharp legal eagles. They know the ins-and-outs of even the most tortuous provision of Taft-Hartley, and what NLRB will do with it, as well as they know their own telephone numbers. It would be hard to find more competent men to argue against an injunction banning pickets. And any union negotiating team would be strengthened by having either of them as a member in a hot and heavy bargaining session with management. Such capacities make them too much in demand.

With all that, their chances for surviving even open warfare between their chief clients would be fair if their legal activities were the only thing involved. But they are right in the middle of the policy and personal issues that separate the labor officials.

• **War Over Peace**—Paradoxically, one big part of the fight concerns efforts of union leaders to make labor peace. Here Goldberg and Woll stayed with their federation clients, and left Beck and McDonald to work out their own programs.

The no-raiding agreement now in operation between 100-odd AFL and CIO unions is the baby of Meany and Reuther. Both have plugged hard to end the federations' membership wars, bucking major opposition to the plan from the Steelworkers and Teamsters—

who still refuse to sign the agreement.

Goldberg and Woll supported the plan—but for Woll, at least, it was touch and go for a time. It worked out this way:

• Goldberg's position was pretty well predetermined. He was in on the CIO's policy development on the agreement, wrote the legal document, joined in the signing festivities with the AFL. When McDonald decided to boycott the project, Goldberg stuck with Reuther—and the steel union leader chose not to make an issue of it.

• Woll was on more tenuous ground. In a Miami AFL meeting last February, he was caught between other teamster attorneys who questioned the legality of the agreement, and Meany who wanted Woll's support. The conflict was so obvious to all concerned that Beck advised publicly that he wasn't holding Woll to the teamster position. Woll sided with Meany.

• **Hard Choices**—If McDonald, whose bitterness towards Reuther takes many forms, decides to follow through on a boycott of the peace plan, it would put Goldberg right in the kettle. From the time he helped to set up the operation, no union has refused to go through its procedures.

Woll must face the outcome of the AFL's own jurisdictional peace plan, which is still in the works. It comes up before the AFL's national convention this month, and Beck has already indicated he doesn't favor it.

There's another phase of the split

that both attorneys would just as soon forget about. Beck and McDonald have joined John L. Lewis in an informal alliance, aimed at challenging the Reuther-Meany leadership. So far, this hasn't got out of hand. But if the personality differences grow into something substantial, the lawyers may have to choose sides on this one.

• **Valuable**—Nobody involved wants this to happen. Goldberg and Woll are too valuable in the different services they provide for their feuding clients.

Besides serving as general counsel for the CIO and Steelworkers, Goldberg is also a policymaker. For Reuther, he furnishes advice on all CIO programs, joins in all CIO board sessions, frequently takes the CIO views to Congress, and handles its legal position before the National Labor Relations Board, and the courts.

But under Reuther, Goldberg is more confined than when he served under the late Philip Murray. He virtually ran the CIO in Murray's later years—all problems were funneled through Goldberg before reaching Murray. When Reuther took over in 1952, Goldberg moved his desk out of CIO headquarters into a building that housed McDonald's Washington offices—and became just one of Reuther's top advisers.

• **Varying**—Goldberg's work for McDonald is somewhat different. He plays a prominent role as negotiator for the Steelworkers, besides handling legal affairs. The recent high-priced settlement with the steel companies confirmed his value.

Woll is more confined to the legal end of labor's affairs—both for the AFL and Teamsters. Generally, he comes into the picture after the unions have set policy, and helps to work it out. His firm of six attorneys is in court much of the time—particularly for the Teamsters, who were involved in 60 court cases last year. His value can be attested by Woll's claim never to have lost a judgment for the Teamsters in seven years.

• **Routes**—The top labor lawyers started up the road from the same city—Chicago—and ended in Washington just two years apart. Their paths to the goal were different, though.

Woll rose in Chicago as a young lawyer to become Special Assistant Attorney General in 1934. On appointment by Pres. Roosevelt, he became a U.S. Attorney in 1940, and was reappointed by Pres. Truman in 1945. Two years later, Woll resigned to join Joseph Padway in private practice. Padway represented both the AFL and Teamsters, and Woll took over both clients when Padway died in 1947.

Goldberg was a practicing labor lawyer in Chicago when he was called to the CIO by Murray in 1948.



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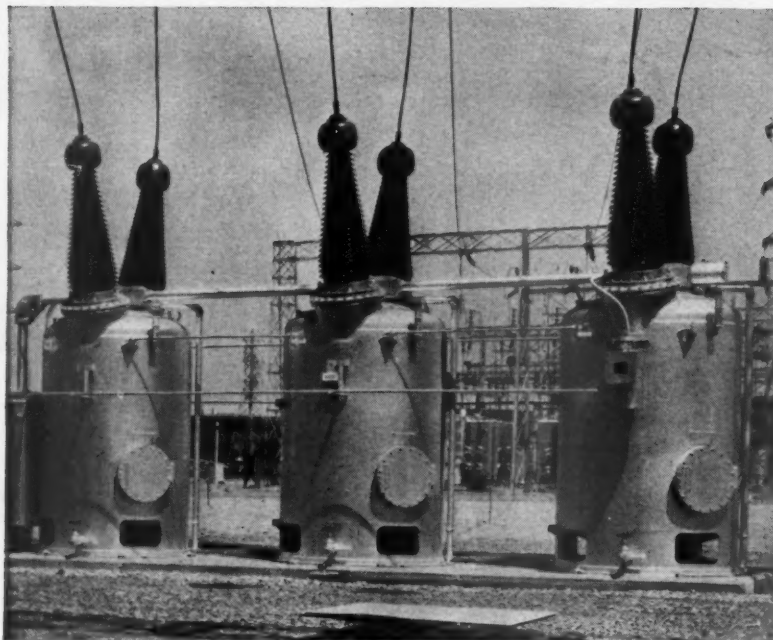
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Rail Demands

Operating groups seek to boost earlier 1954 gains, in wake of new terms granted to nonoperating men.

The nation's railroads, which have already granted an estimated \$300-million a year in pay increases in 1954, face a new round of wage negotiations. Four unions representing 300,000 workers have asked the carriers to reopen their contracts; a fifth, with 80,000 members, is expected to follow suit within the next few weeks.

The four unions that have served formal notices are the Brotherhood of Railroad Trainmen, the Brotherhood of Locomotive Firemen & Enginemen, the Order of Railway Conductors, and the Switchmen's Union of North America. All four have already had 5¢-an-hour pay boosts this year, plus minor fringe increases.

The fifth union, about to serve notices reopening its contracts, is the Brotherhood of Locomotive Engineers, which has also had what it describes as an "unsatisfactory" 5¢ pay boost, through an arbitration award two weeks ago.

• **Nonoperating**—Last week, carriers granted 900,000 nonoperating employees a health-welfare-hospitalization program recommended by a Presidential fact-finding panel, along with seven paid holidays a year and a third week of paid vacation after 15 years' service. The cost of this package settlement to railroads is an estimated 6¼¢ per hour.

Carriers had just announced that they were going to try to meet the addition to labor costs without fare or freight rate boosts when new demands began coming in. The roads reacted with a flat statement that with "net income ... off 50% since December ... we wouldn't think of granting anything further at this time."

The new set of demands are based largely on the packaged benefits granted the nonoperating or "off train" employees. The operating groups want a part of the new health-welfare-hospitalization benefits, and increased pay.

• **Shorter Week**—BLF&E, for instance, is demanding a 40-hour work week (instead of the present 48 to 56) and a \$2.56-a-day wage boost—to keep weekly pay the same as now.

BRT, with 215,000 members, wants a pay boost but hasn't said yet just how much. It also wants seven paid holidays a year and a number of rules changes—including one that would limit the number of cars in freight trains.

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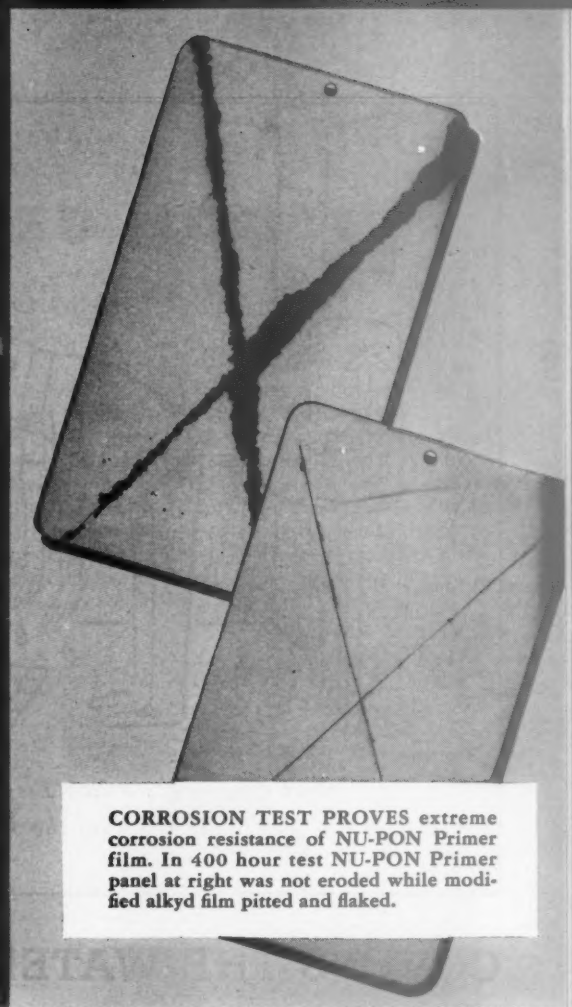
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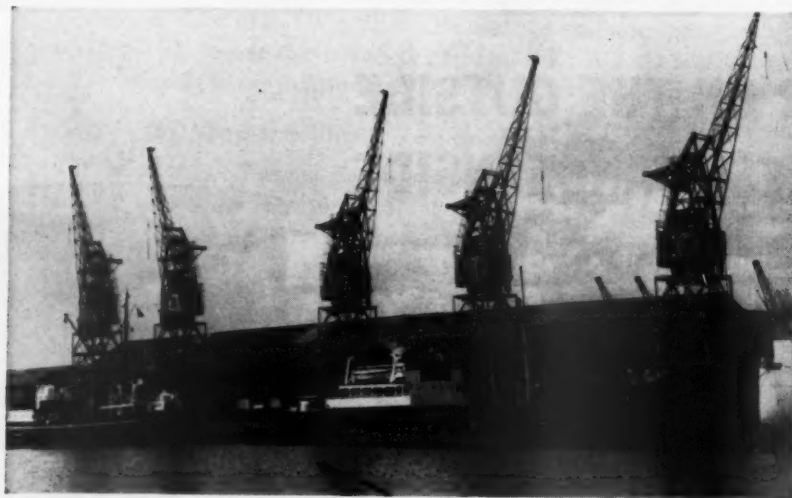
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demands. The small Switchmen's Union is seeking a 28¢-an-hour raise in its present \$2.06 hourly wage.

• **One by One**—While the BRT, BLF&E, ORC and Switchmen's Union are expected to bargain with carriers through regional conferences, BLE intends to negotiate with employing roads individually.

Its demands will concentrate on raising engineers' pay (which now averages about \$600 a month) indirectly, through changes in the so-called "money rules" in BLE contracts. For instance, the brotherhood's new demands call for a pay differential for night runs and extra pay for Sundays; extra pay for engineers who use radio, telephone, and other communication equipment or who run into delays on long trips while they pick up or drop Diesel units; time-and-a-half for overtime work by engineers not on regular runs, and expense allowances for crewmen who have to lay over on runs away from home.

LABOR BRIEFS

Clues to the future course of the United Steelworkers in the CIO will be sought at the USW convention opening in Atlantic City Sept. 20—same day the American Federation of Labor convenes in Los Angeles. David J. McDonald, USW president, may ask the steel union to revise its constitution to omit any mention of CIO, but isn't apt to urge a withdrawal. If resolutions at a western USW conference are a tipoff, the steel union might also go on record against any merger with AFL.

Detroit auto dealers are worried by threats by the Brotherhood of Teamsters (AFL) to hamper deliveries of 1955 models, when they come out. Having got nowhere in a drive to organize auto salesmen in Detroit, the Teamsters now say they will picket dealers when it will hurt most—at new model time.

Pay will be cut under an agreement between Pressed Metals of America, Inc., and United Auto Workers (CIO), covering a plant in Port Huron, Mich. The terms include a reduction in the piece rate, a 20% pay cut for foremen and supervisors, and a reduction in the office staff. The saving is estimated at 20% of direct labor costs.

No-union voting continues to worry unions. Last week, the National Labor Relations Board announced that during the first half of 1954, unions won 63% of the conclusive elections conducted by NLRB, were rejected in 37% of them. A few years ago, unions consistently won 70% to 80%.

FROM THE AWAKENED SOUTH

...A Pioneer in Industrial Development Speaks

More fiction than fact has been written about the South in the last hundred years. But the facts today make a better story than fiction. Mississippi, a pioneer state in an industrially and economically awakened South, is a good example.

True, Mississippi indulged in the troubled sleep of a one-sided economy until little more than a decade ago. But once aroused, she has marched with seven-league strides to outstrip the rest of the nation in almost every department. Her per capita income is up 284 per cent; manufactured product sales have climbed 506 per cent; business volume is up 368 per cent; bank deposits show a 326 per cent gain, and cash farm income climbed 125 per cent.

Mississippi has, and always had, the necessary raw materials, the climate, labor and other natural resources required for industrial development. Yet her economy was agrarian and her raw materials remained undeveloped until a few short years ago.

There are some very definite and conclusive reasons for this sudden change in a state which not too long ago was one of the Southern economic problem children.

Today Mississippi offers advantages unequaled by any other section of the nation. She is in the center of rapidly expanding new markets. She possesses immense stores of raw materials, a large reservoir of intelligent labor, abundant fuel and electricity and unexcelled transportation facilities.

Yet one factor which spells the difference is the people. For Mississippians, whether they work in the

factory or hold office in government, are partners in the business of helping to develop their state.

This has been proved repeatedly in more than 100 communities through the unique BAWI* plan which permits political subdivisions to vote bonds to finance the purchase of land and the construction of buildings for lease to new or expanding industries.

Cooperation of this type from everyone has been the factor which has attracted scores of nationally known industries to locate in Mississippi.

Governor of Mississippi

BAWI stands for "balance agriculture with industry"—a plan which saves you not only the initial investment in a plant, but which assures you the backing of the community in which you locate. For the complete facts on this plan and for any additional information which you require, write to me and be assured that your request will be treated with the utmost confidence.



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INDUSTRIES



REPAIR JOBS swarm into the Nevins shipbuilding yards when the news spread that the company, instead of folding, had been bought by yacht owner Carl Hovgard.



HIGHBALL II, owned by Charles Bliven, gets a propeller fixed at City Island yard.



ARMIDA, Max Baum's luxury cruiser, needs a new section spliced into its mast.

All's We As

News that Henry B. Nevins, Inc., the Tiffany of shipbuilding—was about to close its City Island (N.Y.) yards stunned the entire yachting world. Captains and commodores all over the country convened to brood over where they would order their next boat. And more than one board of directors shelved company business to discuss the more urgent problem of how to get a yacht serviced now.

The decision to close the 48-year-old shipbuilding company was more of a blow than a surprise. The custom-built yacht business has been in a steady decline for years. As Mrs. Henry B. Nevins, widow of the founder, explained, "Custom-built American yachts have become too expensive, even for the wealthy." Nevins couldn't compete with the prices of yachts built by cheaper labor in German, Scandinavian, and Dutch yards.

• **Into the Breach**—Carl Hovgard of

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We Again for Yachtsmen

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VERSATILE, 90-ft. motor sailer owned by Harold S. Vanderbilt, takes to the water again—more resplendent than ever after its fresh paint job at Nevins yard.

Rye, N. Y., president of the Research Institute of America, Inc., was one of the unhappy owners to be caught. To him, a future without Nevins to care for his boat was too bleak. So he decided to buy the plant, consisting of nine acres of wharves, boathouses, rigging, and maintenance shops.

The immediate reaction to the purchase was a new boom in business. A fleet began to come into the company's yard on Long Island Sound for refurbishing and checkup. When the boating season winds up next month, close to \$4-million worth of assorted craft will be stored and serviced at the plant.

• How to Survive?—But the big question was still how to keep the yard going—in something resembling the black.

According to Hovgard, boat yards throughout the country must depend on Nevins for certain types of work—

sparmaking, rigging, and fittings. Hovgard intends to continue to build up this end of the business, but his real interest is building yachts. He has worked out a plan that, he thinks, will make it possible to compete with the European builders.

• Challenge—A comparative newcomer to yachting, 48-year-old Hovgard admits that he is entering the venture more as a challenge than as a business. He would like to get the company back to building the larger custom yachts, but he is a realist, and doesn't expect too many takers in the higher-priced ticket line. But he does feel there's a real market for so-called low-priced models, and he has worked out a plan to build them profitably.

To keep operating costs to the point where he can build a good boat for \$40,000 to \$60,000, Hovgard feels that several boats of the same type must be built at the same time. In



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this direction, he is willing to speculate. "If Nevins gets bids for two or three boats, we'll risk cash on building more of these less expensive and luxurious yachts in a gamble that there will be a market for them," he says.

Hovgard thinks, too, that his venture will profit from the changing picture abroad. During the postwar years, many Americans had their sailing and cruising craft built in Europe because of the savings of from 20% to 30% in labor costs (BW—Jan. 17 '53, p. 133). Hovgard is certain that now—with the European economy improving and labor getting paid more—Nevins can compete on a quality and price basis.

• **Buy America**—Hovgard says there are a couple of other things that will swing Americans to home-built custom yachts.

First, many owners will be willing to pay the 10% or 15% difference in price in this country because they can watch their boats being constructed step by step. They can thus make changes in both design and structure while the boat is being built.

Second, correcting flaws and defects in foreign-built craft after it has been shipped to this country is expensive, and often not worth returning the boat to its European basin.

• **Innovations**—Although Hovgard took over the plant only a month ago, he has already made a lot of changes. He rehired 35 old employees, and announced that he intends to keep his regular workers—around 50—on a year-round basis (it was seasonal before). He also has ambitious plans to modernize the buildings, and to rearrange departments and supplies to speed up production. At present, there is a quarter-mile walk from the front office to the wharves and maintenance shops. More floating space will be used to accommodate boats. Currently, there are only two docks and the workers have to use a launch to get to boats at moorings. With the improvement, they will be able to step from float to float from the shore.

Hovgard says he intends to follow the principles of the founder in giving a customer the finest boat in every respect, the best in materials and workmanship, at a fair price commensurate with the material and the labor required. Unlike some other top-quality yards, Nevins has been strictly a construction yard, building to the plans of independent designers almost entirely.

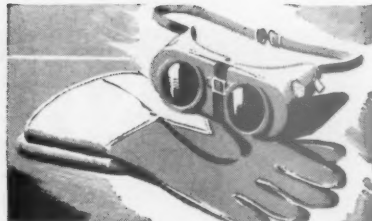
• **Cream of the Trade**—The Nevins shop record book reads like a "Who's Who" of American yachting. Among the cruising boats built there are: Brilliant, Stormy Weather, Elizabeth McCaw, Actaea (now Djinn), Blitzen, Odyssey, Revonoc, Rascal, Courageous, and Cmdr. John Nicholas Brown's 73-



"Oceanic" harvester duck is a specially constructed fabric for use in conveyor belts or agricultural machinery where strength and durability are required.



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ft. black-hulled yawl, Bolero—present flagship of the New York Yacht Club.

Hovgard himself is a sailor. His own boat, the 56-ft. racing yawl Circe, won the Class B pennant in this year's Newport-Bermuda race. He plans to enter it in the annual race from Havana to San Sebastian, Spain.

Hopeful Rodents

The chinchilla industry got a setback when its first auction flopped, but breeders aren't discouraged.

For 36 years, the breeders who make up the chinchilla industry have been living for one day—the day when they would have enough of the luxury pelts to take to market. Since the original breeding stock was brought in from Chile, a generation ago, chinchillas have been a maternity ward operation (BW—Feb. 27 '54, p154). Breeders have sold only to one another—not to the public. The industry has lived by drawing in new capital rather than by marketing its products. The thing that kept it going was the expectation that some day—when the supply of pelts was big enough—furriers would fight to buy them.

Early last year, the Farmers Chinchilla Cooperative of America counted noses, and decided that at last the breeders' patience was to be rewarded. So, early last June, chinchilla breeders led their offspring to the auction block, and waited for an avid fur industry to snap up the little beauties.

At first glance, it looked as though the chinchilla had flopped. In 90 min. of bidding, prices tumbled from \$175 a pelt to \$11 (BW—Jun. 26 '54, p32). Upset by the coolness of the buyers, breeders withdrew half the 11,000 pelts offered. Outsiders, and many of the smaller breeders, were ready to write off the chinchilla.

• **Second Wind**—But now that the industry has had time to take stock, it has decided that the sale wasn't such a disaster after all. Far from being discouraged, it's already planning another auction for the fall.

In fact, the co-op has decided that, in some respects at least, the auction actually was a success rather than a flop. According to Calvin L. Skinner, secretary-manager of the cooperative, the average price paid at the auction was \$36.77. The co-op had announced previous to the auction that the industry had a profitable future if skins sold for an average of \$25.

• **Lessons Learned**—While the breeders may be whistling in the dark, their



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optimism can be justified on at least three counts. For one thing, the auction accomplished the desired job of weeding out a lot of speculative breeders. Second, it taught the co-op a lot of things about marketing chinchilla pelts. And then, it gave the industry a new incentive.

Most breeders agreed that the predominant factor in the buyers' quick loss of interest was the low quality of many of the skins. They point out that many pelts brought \$100, and that 75% of the good ones were sold. Also, they got the impression that many buyers were not familiar enough with the rare skins, and were afraid of over-buying.

In the future, says Skinner, the pelts to be auctioned will be screened more closely. Breeders will try to shut out what a Dallas rancher calls the work of "amateur pelters, culls, or skins of animals that had died of old age."

• **No Surprise**—The number of poor skins at the first auction was blamed on breeder's lack of familiarity with the fur industry's wants, plus a plain reluctance to offer their choice pelts at the first try. According to one breeder, "None of us sent our best pelts up there." Another said that he just plain wasn't ready, didn't have either quantity or quality. One veteran claims that 50,000 average pelts are needed to produce 5,000 No. 1 pelts.

Another factor gleaned from the auction was that the fur trade is overly suspicious of damaged skins. Skinner says that the trade will have to be educated to the fact that much of this damage is mechanical—rather than chemical—having taken place either in the pelting or in the handling of the skins, and that such skins are still good, workable merchandise.

• **Educational Program**—Breeders feel that these problems will be more easily solved because the auction has helped to stabilize the industry. According to C. L. Stevens of Compton, Calif., who got the \$175 top price, "Chinchilla raising can no longer be called a racket in breeding stock or a chain-letter deal."

The breeders also feel that little by little chinchilla fur is gaining public attention. "Once the fur garments are seen at the theater and the opera," optimists say, "demand will grow." This optimism is reflected in the fact that since the sale chinchilla prices have fluctuated only slightly.

Meanwhile, 200 members of the San Fernando Valley National Chinchilla Breeders Assn. are attending night classes—sponsored by the association—to learn more about chinchilla raising. And the association plans to do a research job into the uses of damaged or inferior pelts. Breeders think the leather might be utilized, or the hair may have some commercial use.

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**All it takes are heat, water, and a pot. It's as simple as that,
at least for tea, vegetables, and soft-boiled eggs.**

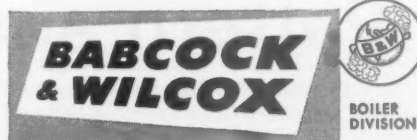
But take this same principle with the same elements and apply it to the insatiable appetite of American industry for power. How big do the "pot" and "stove" have to be to boil 200,000 gallons of water in an hour, at thousands of pounds pressure, with temperatures over 1000 F, using any fuel from lignite to natural gas?

The answer is plenty big — often bigger than a 15-story building. And, along with that, the little lady in the apron becomes a corps of power engineers whose task it is to design, build, and operate these fantastically efficient boilers for the conversion of heat into usable power.

The light, heat and power needs of America are great and ever-growing — a growth that, at B&W, is being fed by *engineering*. Higher pressures, increased temperatures, the winning battle for more heat from less fuel — are the problems that must be solved and *are* being solved.

B&W developments like Cyclone Steam Separators, coal pulverizers, advances in oil and gas firing, Cyclone Furnaces, pressure firing, high-temperature alloy steels, shop-assembled steam generators, and waste heat boilers and similar heat recovery equipment are advances in the generation of power that cut bigger jobs down to size.

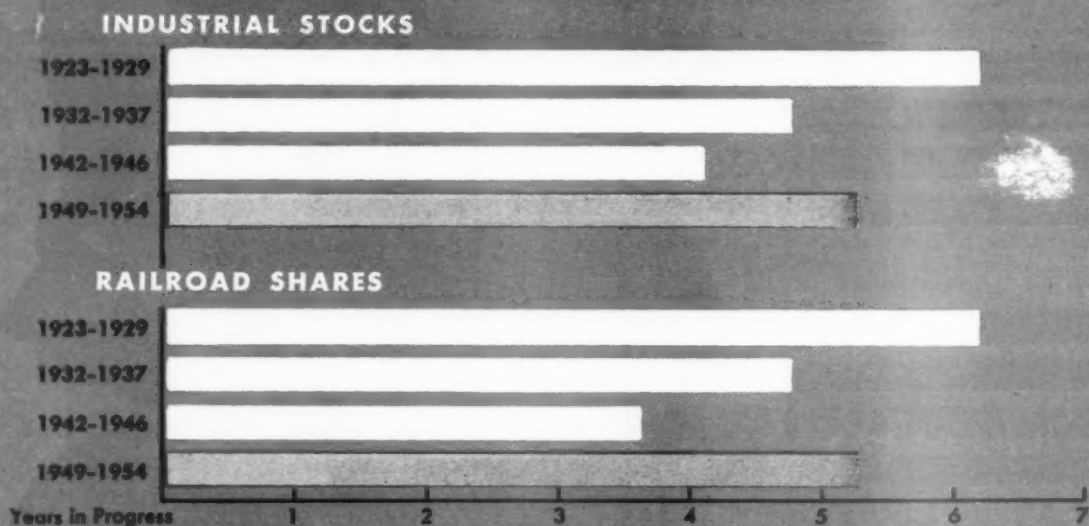
So today, as yesterday, B&W engineers turn their talents to finding better ways to "boil water" — to fill tomorrow's greater power needs for all America.



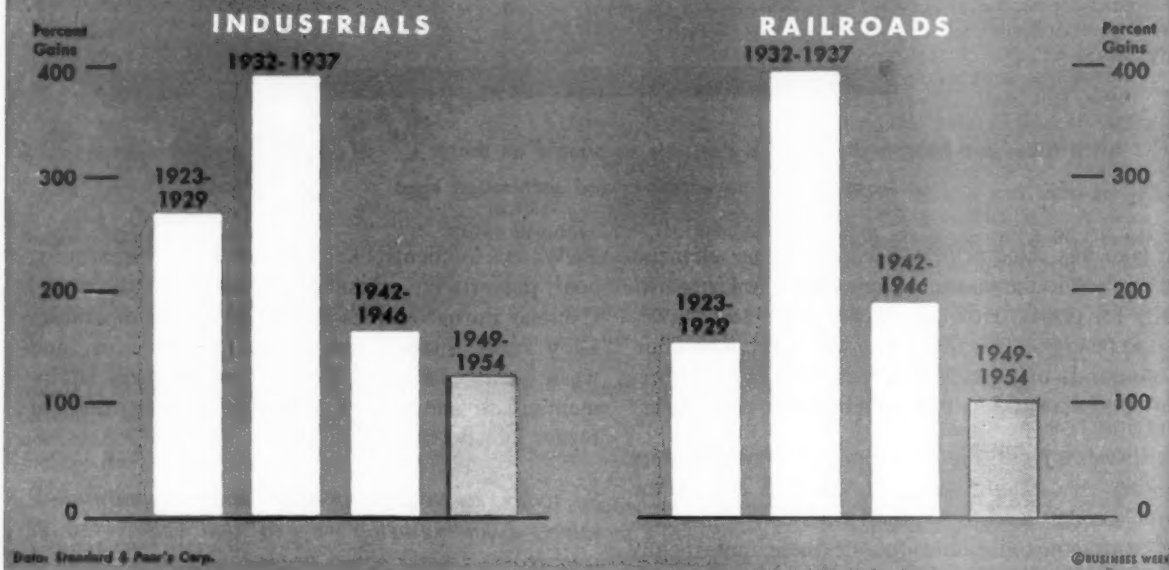
N-106

FINANCE

Today's Bull Market vs. Those of 1929, 1937, 1946 in Longevity...



...And in Gains

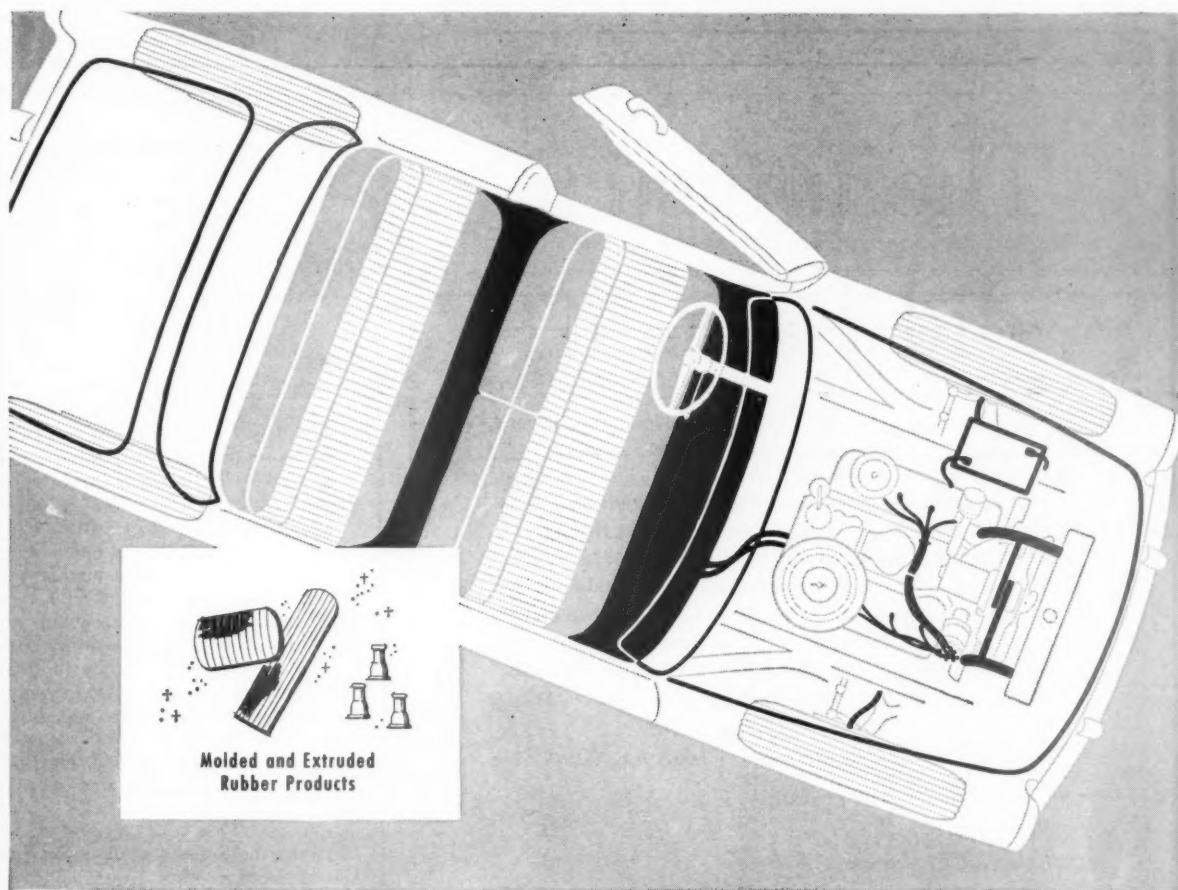


No Pattern and No Clues

The bull market under way since mid-1949 isn't too wearily old nor too frighteningly steep—not if you compare it with some of its famous predecessors. Take a look at the chart above to measure it both for length of run and gain.

In time, it has nearly a year to run before it can match the life of the longest of all Wall Street booms, the one that began to wane just 25 years ago this month, and then blew up with a bang in October (page 75).

In climbing power, the present market is even further from a record, at least on a percentage basis. It is true that months ago Standard & Poor's weekly industrial stock price index burst above the old record rung up in



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The unusual did happen

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POLICYHOLDERS BUSINESS	LOSS PAYMENT
TV and Radio Sets	\$ 35,611.95
Wire	\$ 28,073.25
Electrical Appliances	\$105,824.98
Sewing Machines and Parts	\$ 32,442.53
Cabinets and Toys	\$ 86,829.46
Wool and Wool Tops	\$ 34,689.56
Radio and TV Parts	\$ 25,000.00
Floor Coverings and Appliances	\$ 32,707.31
Communications Equipment	\$ 46,354.63
Plastic Yarns	\$111,634.03

Because these amounts of money were put back into working capital these policyholders were in a position to immediately earn the profit that would normally accrue from turnover of that capital. For booklet, write Dept. 42, First National Bank Bldg., Baltimore 2, Md.

**American Credit
Indemnity Company**
of New York

1929. But the companion rail index has come nowhere near matching the trick. What's more, neither index has risen so far percentagewise since mid-1949 as both averages did not only in 1929, but in 1939 and 1946 as well.

• **Poor Precedents**—Superficially, you might draw from these facts the conclusion that the present bull market is not yet ripe to drop, and that when it does it may not fall so far. But that happy conclusion leaves out an essential factor: There are no mortality tables covering bull markets, and no reliable yardsticks for mushroom growths. Delving for guidance in the histories of the market will bring you no trustworthy pattern at all. Indeed, the only similarity to be found among bull markets is that generally they all begin and end when least expected.

The Dow-Jones daily stock tables, which have been maintained longer than any of the popular market yardsticks, show that since 1900 Wall Street has had 13 recognized bull markets, including the present one.

The first 12, as far as the industrial shares are concerned, ranged in duration from 22 weeks to 318, and showed gains from 28.4% to 371.6%. As for the rails, their booms had life spans from 25 weeks to 317, and gains of 16.6% to 387.2%.

The same Dow-Jones records seem to show that bull markets follow Newton's law of inertia: They continue in motion until outside forces intervene. The end comes not so much from loss of momentum as from outside interference.

All of which brings up the point that this is a good time for investors and traders to take a look at certain technical factors.

• **A Dire Month**—For one thing, the month of September has often been bad, and sometimes catastrophic, for stock prices. Prices moved lower in 14 of the last 25 Septembers. On the side of really dramatic September disasters consider these:

• The month marked the beginning of the 1929 debacle.

• In 1937, it brought proof that the bull market was dead, confirming earlier and widely ignored signs.

• In 1946, September price drops were the steepest of that year's bull market "corrections."

There's another note of caution in the recent disappointing action of the market. August prices were more irregular than in any other month in the current year-long phase of the 1949-1954 market. As a result, August proved the first "losing month" experienced in almost a year (page 128).

Still another factor meriting the scrutiny of the wise eye is the new shift from blue chip shares and their close cousins to the low-price stocks that

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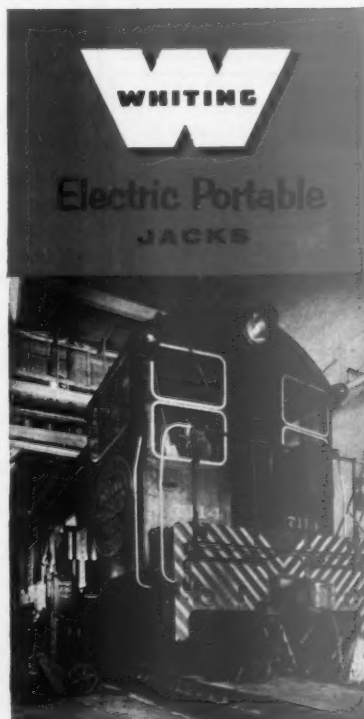
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offer—if they continue to rise—a higher rate of percentage gain (BW—Jul. 31 '54, p108).

• **The Brighter Side**—You can add all the unfavorable aspects together and still prove that the bull needs burying. After all, no bull market in history moved exclusively upward. Each has had to rest from time to time to digest earlier gains. It's quite possible that the past few week's has been just such a period.

Then again, only rarely in the recent declines has the market been subjected to a real flood of selling orders. Even when it was, the price weakness had no real follow through, any more than there was real rallying power. On balance, the latest price action seems due more to the withdrawal of bids than of any concerted desire to liquidate.

• **But Not Too Bright**—The plus factors, in their turn, hardly add up to an endorsement of the advice of the loudest snorters among the bulls, who suggest forgetting everything that has happened in the past few weeks. Everyone in the Street knows that hurtful 10% reactions are quite common during bull markets. Also under the Dow Theory a secondary move can erase up to a third of the gains in a previous move without casting any doubt on the durability of the bull market.

So, the wise investor will move cau-

tiously when he scents a coming change in the market, no matter how beamishly things have been going.

Rising stock prices in the past few months may well have outrun the recovery of business generally, and they may have more than discounted the easy money policy now in effect. If so, two of the main boosters of rising stock prices in the year would have lost much of their potency. This in turn would mean that any further broad advance would have to come from an increase of public confidence—an increase so large that it would mean willingness to pay a higher price for earnings and dividends.

This increase might well happen, but it might take some time. While the public is making up its mind, there could be some sharp adjustments in the market.

That's precisely why many of the old pros are advising clients to take things easy at least for a while. Here's what Standard & Poor's says, "While maintaining a constructive attitude toward the long-term outlook, we are not anxious to buy stocks at this stage, except on technical recessions or as attractive special situations come to light. The market, in our opinion, needs to consolidate its year-long advance. Such a phase may now be at hand."

The Heat Is On the Cities

They're scrambling to fill increasing needs for schools, streets, and other municipal services. Taxes are heavier, but there'll have to be more borrowing, too.

The nation's 481 largest cities last year collected more taxes, spent more money, rolled up more debt than ever before. They are riding a trend that dates from 1947 and shows no signs of petering out.

These are the findings of a Commerce Dept. study of revenue, expenditure, and debt in cities of 25,000 or more population. There are 16,297 smaller municipalities, but the 481 bigger ones account for four-fifths of all municipal income and outgo.

Last year, according to the Commerce Dept., the 481 cities set records of close to \$7.1-billion in revenues, nearly \$7.3-billion in expenditures, and more than \$1.2-billion in new borrowing. On all three counts, they ran 7% to 8% above 1952.

At the start of this year, outstanding debt of the 481 cities stood at \$11.3-billion. This was about \$730-million more than a year earlier, even though some of the new borrowing had been used to retire older debt.

• **Upward Pressure**—The Commerce

report shows that municipalities are still unable to bring income into line with outgo—without borrowing. Cities and villages are under pressure from rising populations, rising costs. At a time when labor and materials cost more, these units are forced to expand school, street, and sanitation systems and police and fire departments, to take care of increased populations.

• **Schools**—The postwar boom of babies is affecting the schools most directly and expensively. Among the 481 cities in the Commerce study, the largest single expenditure was for education, despite the fact that most of these cities have separate school districts whose spending doesn't show up in the municipal figures.

The 1953 expenditure of \$967-million for education was 7% more than in 1953, Commerce says. It accounted for about one-sixth of all general expenditures by the 481 cities.

Cities unanimously put education at the top of their list of future problems. As the postwar kiddie-car set grows up,



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facilities from kindergarten to senior high school will have to be successively expanded. Besides new buildings, that means more administration and supervision, more teachers, more pay for both new and present teachers, bigger budgets for building maintenance and also for repairs.

• **Streets**—Second biggest expenditure by the 481 cities last year was \$637-million for streets and highways, including \$319-million of capital outlay. This expenditure was 8% above 1952.

City officials see no chance of cutting street and highway expenditures in the near future. In many municipalities, street repairs deferred during World War II remain to be done; some streets that were rebuilt after the war need rebuilding again. And the trend toward suburban living is steadily adding miles of new streets in many cities and their suburbs.

• **Other Services**—Third biggest outlay last year was \$586-million for police protection, an increase of 9% from 1952. With alarming increases in crime, particularly thefts and vandalism, there's no chance for any cutback in municipal costs through economies in police departments. Big cities such as New York are clamoring for still larger police forces.

Fourth biggest expenditure was \$585-million for sanitation, including \$224-million in capital outlay. The total was 10% above the previous year.

Fire protection in 1953 cost \$440-million, a rise of 8% from 1952. The bill for municipal hospitals came to \$352-million, an increase of nearly 11%, and other municipal health services cost \$146-million, more than 7% higher than in 1952.

The only bright note for municipal officials—and taxpayers—was the decline in cost of public assistance (care of the poor). Spending by the 481 cities amounted to \$319-million, a decline of 3.6% from 1952.

• **Per Capita**—Spending by the 481 cities last year works out to \$91.24 per person. Outstanding debt at the start of 1954 amounted to twice as much—\$182.76 per capita.

Both cities (BW—Oct. 10 '53, p64) and states (BW—Sep. 26 '53, p134) are constantly looking for new sources of revenue, so as to keep their debt at a minimum. So far, they haven't been markedly successful. In the fiscal year ended June 30, the 48 states took in nearly \$11.1-billion in taxes—\$520-million above the previous fiscal year—yet had to borrow more money than ever in order to keep up with expenditures.

A factor in the states' failure to balance income with outgo was the dip in business, which, sharply lowered receipts from sales taxes, the states' biggest income source. In some cases, collections were down 10% or more.

FINANCE BRIEFS

Consumer finance companies this year will make installment loans totaling around \$3-billion to nearly 10-million Americans, says Paul L. Selby, executive vice-president of the National Consumer Finance Assn. Last year lendings of licensed companies totaled \$2.8-billion. About one out of every seven families, Selby adds, uses installment credit each year.

No merger: Lukens Steel Co. isn't weighing a linkup with any large company, steel or otherwise, says C. L. Huston, Jr., president. He made the statement after rumors that the company was working on a merger of some sort.

Wabec State Bank of Detroit, with deposits of \$120-million, has been admitted to membership in the Federal Deposit Insurance Corp. The bank was the largest not covered by federal insurance. It increases the number of FDIC-insured banks to 13,430.

A rate increase—its first in 33 years—has been granted to Southern California Edison Co. by the California Public Utilities Commission. The boost will permit the company to earn a 5.9% return on its investment. The utility had asked a rise to 6.29%.

National Surety Corp., in a new expansion move, this week began underwriting fire insurance and allied lines on a nationwide basis. The company, long identified with the fidelity and surety fields, expanded into inland marine insurance in 1940; four years later it entered the general casualty insurance business.

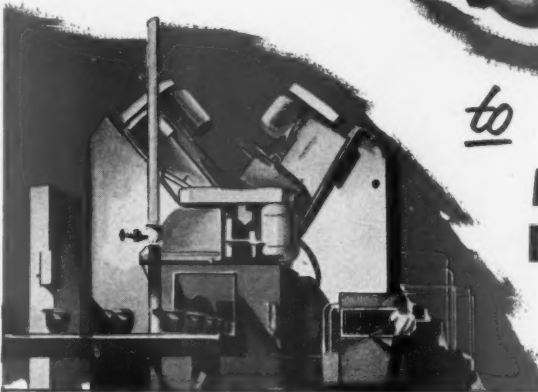
New York City's 120 banks at midyear had deposits totaling close to \$42.2-billion, a new high, says the American Banker. The new peak represents a rise of more than \$599-million over the figure six months ago and an increase of \$2.8-billion over June 30, 1953.

Three meetings of Missouri-Kansas-Texas RR stockholder committees have been called for this month to continue work on a recapitalization plan for the road. The committees are seeking a plan to take care of dividend arrears on the 7% preferred of \$149.50 a share.

Power demands in the rapidly growing Delaware Valley are behind the order by Philadelphia Electric Co. of a new \$45-million 275,000-kw. steam-turbine electric generator unit, said to be the largest of its type in the world.

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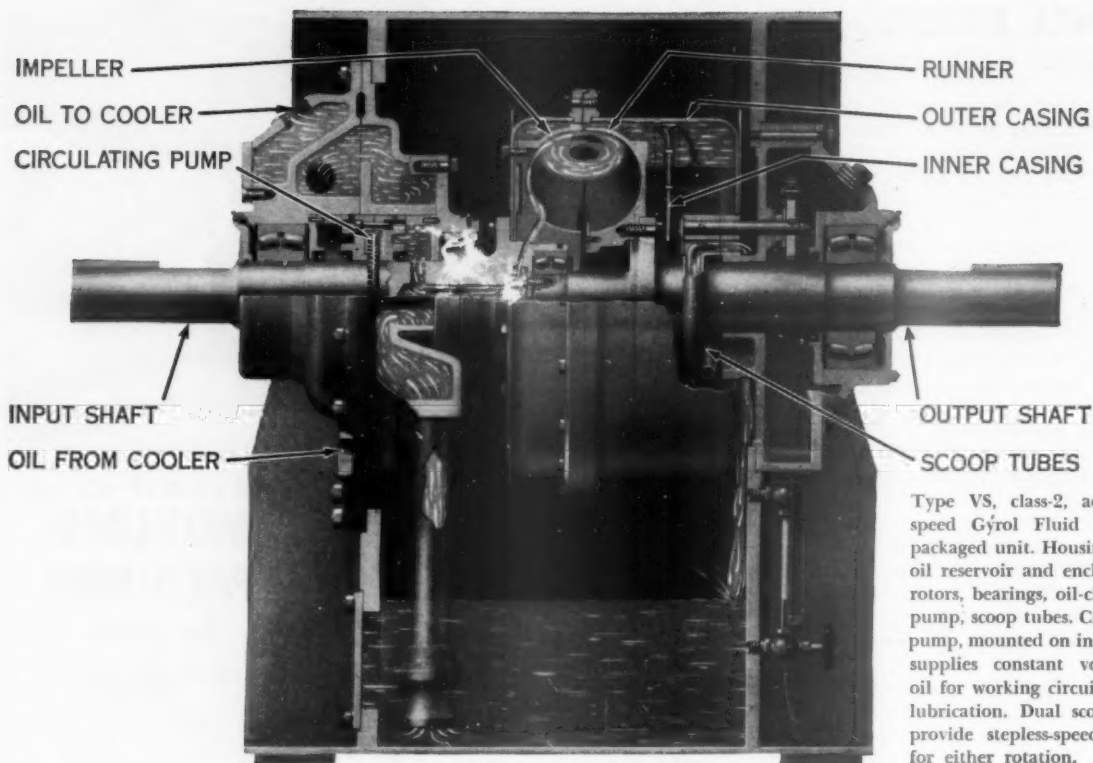
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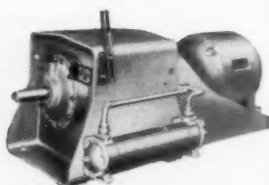


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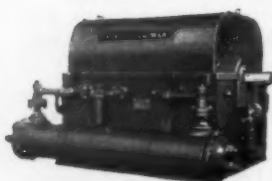
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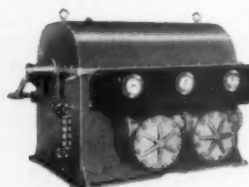
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SPECIAL REPORT

It Started a Quarter of a Century Ago...

The Business Week

A JOURNAL OF BUSINESS NEWS AND INTERPRETATION

FOR THE WEEK ENDING
SEPTEMBER 7, 1929

Business Outlook—Fair But Cooler

THE trade temperature has dropped slightly, after an unusually warm summer, but there is no financial frost in the air as yet, and we look for a long stretch of Indian summer in industry before winter sets in. It is likely to be a fairly open winter, at that.

Looking over the business weather map, the barometers read about like this:

Highs: Employment holds up well. Corporation cash boxes are fuller, and dividends larger. Money is still being made in the stock market and is stirring over fast in trade. Carloadings are running high. Bank reserves are strong. Full activity has begun early in some industries—automobiles, electrical apparatus, boots and shoes. Stocks have not accumulated to any market and production—save in oil—is controlled. The European political and thunderstorms have passed over the international economic atmosphere.

Lows: Industry has been abnormally active all year so far. Forward business is not forthcoming as fast as is necessary to keep up the productive pace. Retail trade has lagged a little behind production. The price level is flabby and lagging. Steel and building are probably on the decline, and automobile figures will probably do no more than park at present levels. The farm outlook, as a whole, is disappointing. The new tariff is in the air and probably will stay there for several months. Congress will be sitting—on the neck of business—soon. Money rates remain at critical, uncomfortable and cramping levels, here and abroad. Security speculation is rampant.

Stock prices are generally out of line with safe earnings expectations, and the market is now almost wholly "psychological"—irregular, unsteady and properly apprehensive of the inevitable readjustment that draws near.

Tariff Racket Begins

THE opening skirmishes in the tariff battle began this week, with Senator Smoot presenting the report of the Senate Finance Committee on the results of its summer perspiration over the suggestions embodied in the Hawley Bill, which the House of Representatives had brought forth in the cool morning of the special session. That is to say, the

Republican members of the Senate Committee presented their report, the Democratic minority were as nearly speechless as Senators can be. Silent and sinister, the minority started to lay a mine under the whole tariff enactment. It introduced—via Senators Simmons (North Carolina) and Blaine (Wisconsin)—a resolution which would open corporation income tax returns to the Senate Committee so that it might judge the true

age and degree of malnutrition of the infant or starving industries crying for protective diet.

Bulletins, communiqués, war trumpets and drum rolls proceed hourly from Washington indicating what Senator So-and-so, or Representative Whatnot, thinks about schedules or administrative provisions. The net result is that no one quite knows what the tariff bill will finally be, or what will happen to it.

... The first issue of

BUSINESS WEEK warned that

all was not well with the

stock market. October 29,

the market crashed.

It was the momentous beginning

of a quarter-century

packed with change...

Twenty-Five Years That Remade America

TWENTY-FIVE YEARS is not a very long time, in terms of history. Yet the last 25 years have had enough change packed into them to do for a century. The effect, in retrospect, is dizzying.

To many, looking back, it all seemed to start just 25 years ago this October. That was the month that saw the great change, the start of the Great Depression. Early in the month the country gave few visible signs of having passed the peak of its prosperity. With more than 10 years of solid growth under its belt, the nation in general felt sure of itself. In some areas (the stock market,

for instance) there were touches of frenzy. For business as a whole there was a comfortable sense of security, a confidence: "We can't go anywhere but up."

By November, all this was changed. And it never came back. The impossible happened. There was, it turned out, somewhere else to go but up. Somehow the look of the world changed abruptly. Not many knew it in October, 1929, but the economy had turned. It was starting down the long, slow, grinding road towards collapse.

The Depression lasted a long time.

It wasn't until another great change—World War II—was on us that anyone could say for sure that the Depression was really over. War finally ended and turned into uneasy peace, then half-war, then uneasy peace again. Prosperity returned, but the feeling of security didn't.

Now, change is the dominant mood of our time. Few men today would be willing to bet that the end of next year will look substantially the same as the end of this one.

• **Bigger**—What happened to business through those 25 turbulent changeful years? Consider the whole economy as a

Steelmaking was a big industry in the U.S. 25 years ago. Today, it's even bigger. And, like almost everything else in the country's makeup, it has changed tremendously. ➡

single giant machine, combining men and materials to produce all the things we need and want. In what essential ways is this machine now different from the way it was in 1929? What has happened to our main industries? To the way businessmen do business? To the way people live? Where are we now—how do we look now, compared with the way we looked 25 years ago?

The first answer is that everything is bigger. The nation's total output (in real terms—not just in dollars) is more than double what it was in 1929.

That's a quick statistic. It is harder to grasp just how big twice as big as 1929 really is. The fact is that there has never been anything like this economic machine of ours for sheer size, sheer power, sheer ability to produce hundreds of millions of tons of product each year, move it over long distances, sell it, use it, and keep on producing more. Last year this industrial giant ground out 112-million tons of steel, 7-million cars and trucks, over 1-million new houses, over 275-million tons of food, 13-million yards of textiles, 7.5-million tons of machinery, over 350-million tons of petroleum products.

• **Richer**—What about the market for this huge output? Where does it all go?

Population, since 1929, has gone up by 40-million. That, in itself, makes for a bigger market for everything. But that's only part of the story.

The single outstanding fact that has had more to do than any other with keeping the economy in high gear is the redistribution of income and, particularly, the upgrading of the lower income classes.

Twenty-five years ago the great bulk of U. S. families earned just enough money to buy necessities. That was the great achievement of the 1920s. For the first time in history, nearly everyone could afford the necessities. But more than 60% of the families made less than \$3,000 a year in 1953 dollars. The amount of money available for buying even small luxuries was strictly limited; and nobody gave much thought to inquiring into what motivates the consumer to buy or not to buy at any particular time (Special Report: BW—Jul. 31 '54, p60).

Today, more than 60% of U. S. 'spending units' are earning over \$3,000

a year; more than 50% are in the "middle class" bracket between \$3,000 and \$7,500 a year.

This is the crucial middle income group on which the economy now depends. This is the group that now has "discretionary" spending power—and has been using its discretion to create a tremendous continuing demand for all kinds of goods that will make workaday living easier, more comfortable, and more plush; that will make leisure more varied and more fun. This is the group that has upgraded all kinds of one-time luxuries into apparent necessities, and in its seemingly insatiable appetite for these new necessities has provided the main drive of the growing economy.

• **More Comfortable**—Take the family car—once, believe it or not, a luxury. There are over 45-million cars on the road today—an average of around one for every family. Think, first, of just the automobile industry, and listen to the company president who says, "The entire national economy depends on this industry. It uses 20% of the steel, and most of the rubber. Directly or indirectly it gives employment to about 12% of the nation's labor force, and accounts for more than 10% of the gross national product." Then think of the amount of growth and change and income that has been generated by the fact that this is a nation on wheels; think, for example, of all the implications of the development





of suburban living.

Look at the mass and seemingly limitless market for all sorts of appliances. Think of the kind of growth that takes place when a big new product comes on the market. Six thousand television sets were produced in 1946; over 7-million in 1953. In those seven years, 65% of American families got themselves a new TV set—and a good number of them were willing to go into debt to do it. Another example: Air conditioning is one of the outstanding growth industries today. Why? Merely because more and more American families are getting the idea that there's no reason why they should be hot in summer any more than they're cold in winter.

• **More Massive**—With the bulk of the population in the middle income group, the mass market has become a lot more massive, and the so-called class market has virtually disappeared. People in the upper income groups may get better quality for their money, but otherwise their buying habits are about the same as those of their less well-off brethren. Upper- and middle-income families all wear much the same clothes, live in much the same kind of houses. They tend to spend their leisure time in much the same way.

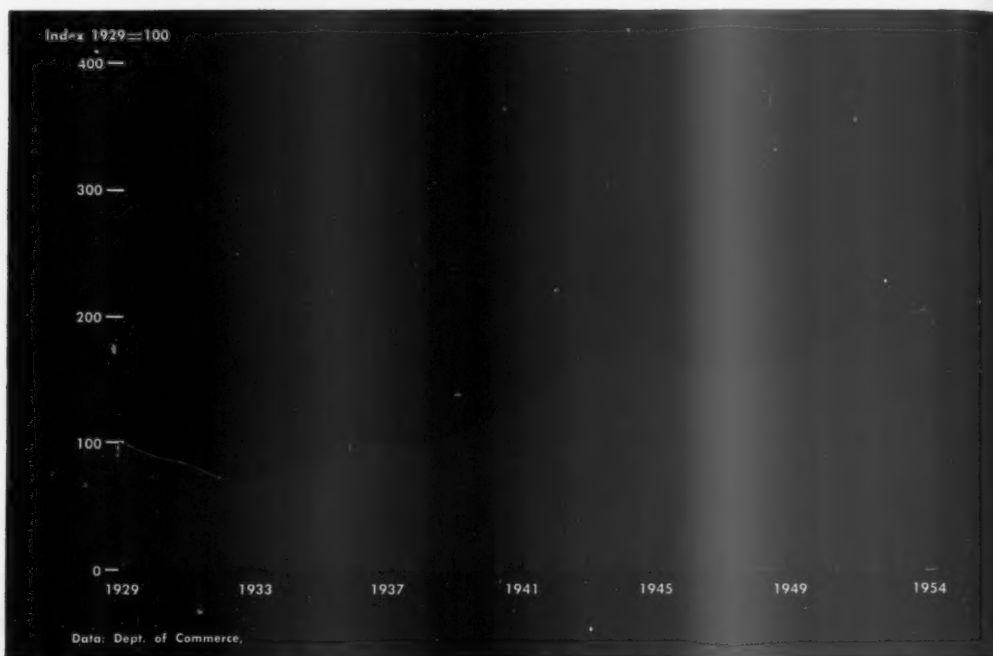
The market is more mature—on two counts. For one thing, it's a lot better educated. For another, it's older. And thanks partly to social security and pen-

sions, partly to savings, these older people are spending more money than it was once thought they would. Advertising men are keeping a sharp eye on this growing maturity of the market.

The population trend away from the farms and toward the cities was already well on its way by 1929. It has simply continued since then. But what of the people who have stayed on the farms? The mushroom growth of the mass media since 1929 — radio, television, magazines—has acted, again, as a leveling agent on the market. There was a time when it was considered good business to stock rural stores with clothing three years behind the New York fashions. Now the farmer's wife and daugh-

Twenty-Five Years Have Brought B

The Nation's Output



ter want just what's being worn on Fifth Avenue.

• **Freer-Spending**—The mass production required to feed this massive market makes price per unit small. Incomes are high. So as a nation we have become highhanded with our wealth. Electrical appliances, office machines, garden tools—these were once rare and treasured objects. They were treated with care and well maintained. Now they're disposable. We don't guard these things anymore—we beat them to death, then turn them in for a later model. The road-builder, the farmer, the construction man, the electrician, the plumber—all have the same attitude. They replace; they don't bother to repair.

This attitude keeps the market going for every kind of product, consumer or industrial. Taken together with initial demand, it makes mass production possible and economical. And it swells the demand for new plants and for all kinds of special machinery to turn out lots of a particular product at the lowest possible cost.

• **The Government**—So we have the magic formula of more people making more money and wanting more things. We also have something else as a basic underpinning for the economy—an almost entirely new factor that has come on the scene since 1929. We now have the federal government as a single massive consumer, initiating and buying

huge quantities of the national product year after year.

In 1929, purchases of goods and services by the federal government came to a fraction over 1% of the gross national product. Last year the federal government's take was just under 17%. And, although the percentages have varied sharply in recent years (around 40% in the war years, down to 8% in 1950), and will no doubt vary sharply again, there is no question but that the government as a consumer will be an important part of the economic picture for a very long time to come.

Defense requirements alone will see to that—defense not only of our own shores, but, to a very large extent, of the whole free world. The years between 1929 and now have seen the evolution of the United States into a position of world leadership, both in peace and war. World leadership means world commitments for military aid, economic aid, technical aid. And this means big—and expensive—government.

This country now has what amounts to a permanent arsenal industry. There are companies that produce only for the government, others for which defense orders are an important part of regular business. There are companies, and large ones too, that would not be in existence at all if it were not for government loans, government purchase contracts, and government tax privileges.

The sheer size and power of this one consumer acts as a tremendous prop under the economy; and a tremendous generating force for growth and income.

• **New Philosophy**—And behind this great power—and always ready to use it—stands a new philosophy of government. A look backward to 1929 turns up what is probably the biggest social-political-economic change of all—the change in thinking on the role of government in the everyday lives of its citizens, and the responsibilities of government for their welfare.

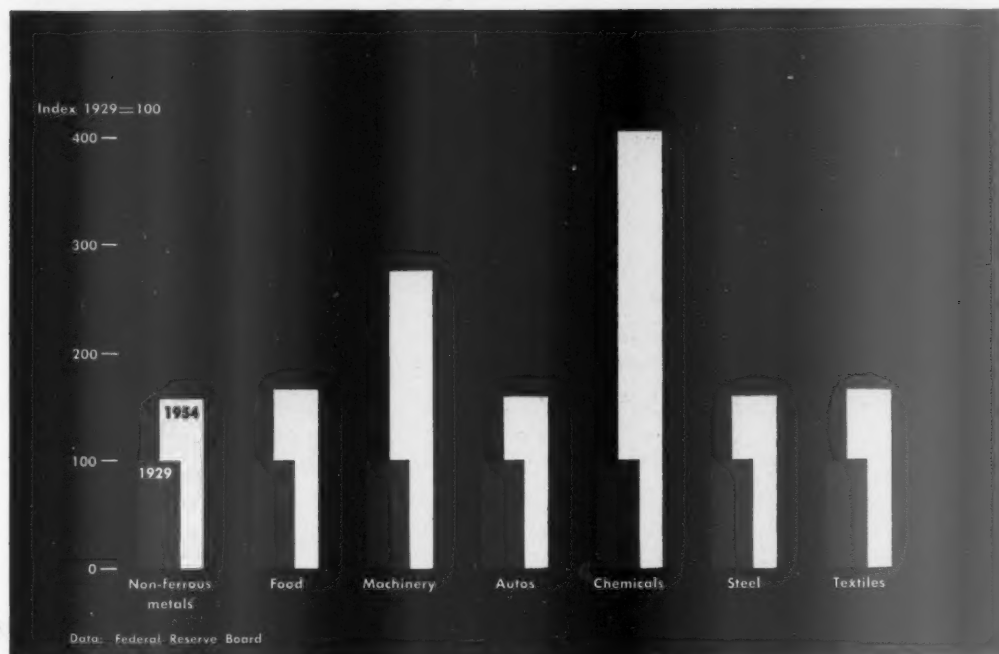
In 1929, economic thinking revered the free market. Anything that tampered with the actions of that market was regarded with deep suspicion. It was generally assumed that any such tampering inevitably would have unhealthy results.

The big change started in the early hectic, and later not so hectic, days of the New Deal. You need only a few historical footnotes to show the changed approach:

In 1932, when millions of people desperately needed food, Congress sidled up to the problem with a \$200-million revolving fund for loans to the states. After that it was up to the local authorities to cope with the situation.

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Output of Industries Like These



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Today, the basic aim is to prevent the need of relief from ever arising. But, if the need should arise, no one doubts that the government would take prompt and massive action.

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• **Powers**—The Employment Act made the principle of government responsibility official, but most of the powers the act envisaged using were of long standing. They were developed piecemeal, mainly to cope with the Depression.

To break the fall if business drops: Guaranteed purchasing power for the

farmer through price supports on his major crops; higher purchasing power for labor through the minimum wage, unemployment compensation, and Social Security; aids to housing; loans to business; public works.

To curb excesses as business move up: Margin requirements for buying stocks; restriction and regulation of the stock market in general.

To go either way, depending on what is needed: Controls on personal credit; controls on mortgage terms for federally insured housing; controls on banking—manipulation of reserve requirements and rediscount rates to get easy money or hard money.

A New Kind of Management

The business of running a business has changed radically in the last 25 years. The corporation, the primary legal instrument of management, has developed into a quasi-public institution. And the basic philosophy of management has developed along with it.

For the fact is that the profit motive is no longer supreme—certainly not in short-run considerations. The president of a big corporation today accepts, as a regular part of his job, community and national responsibilities that make him much more akin to a public official than he is to the tycoons and money barons of a generation ago.

And, over-all, management of the public debt and of the huge powers of taxation and spending, to put money into the economy or take it out.

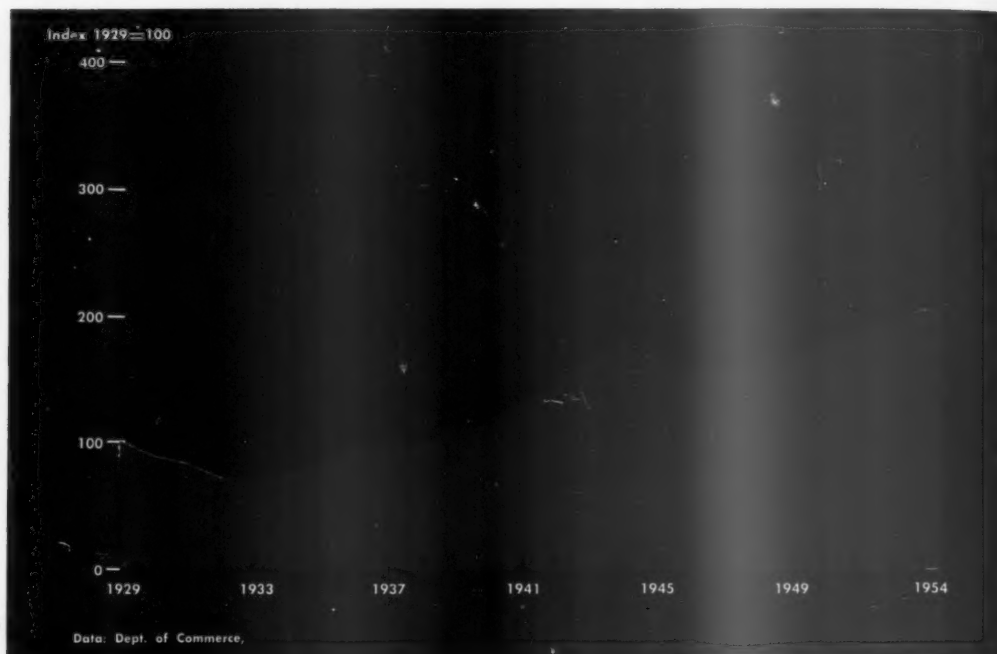
• **And Business**—This is all part of the 25-year change in the environment of business: a bigger and more prosperous market, a bigger and immensely more powerful government. How has business reacted to these changes? How has it changed itself?

You can follow these changes in business by looking at three of its essential parts. First, look at the men who guide it—management. Second, at the men who do its basic work—labor. Third, at the tools it uses—the production plant.

• **Privacy?**—Management, especially big management, operates today with about as much privacy as a goldfish. In contrast with the tightly-knit organizations that were the rule 25 years ago, ownership of big business is diffuse. The stockholders are many; they simply merge into a general public that is capable of bringing formidable pressures to bear on any management. The government is everywhere—and is always looking over the management man's shoulder. Regular detailed reports to the tax collector, reports to the Securities & Exchange Commission—in these alone, almost all the essentials of a company's operations

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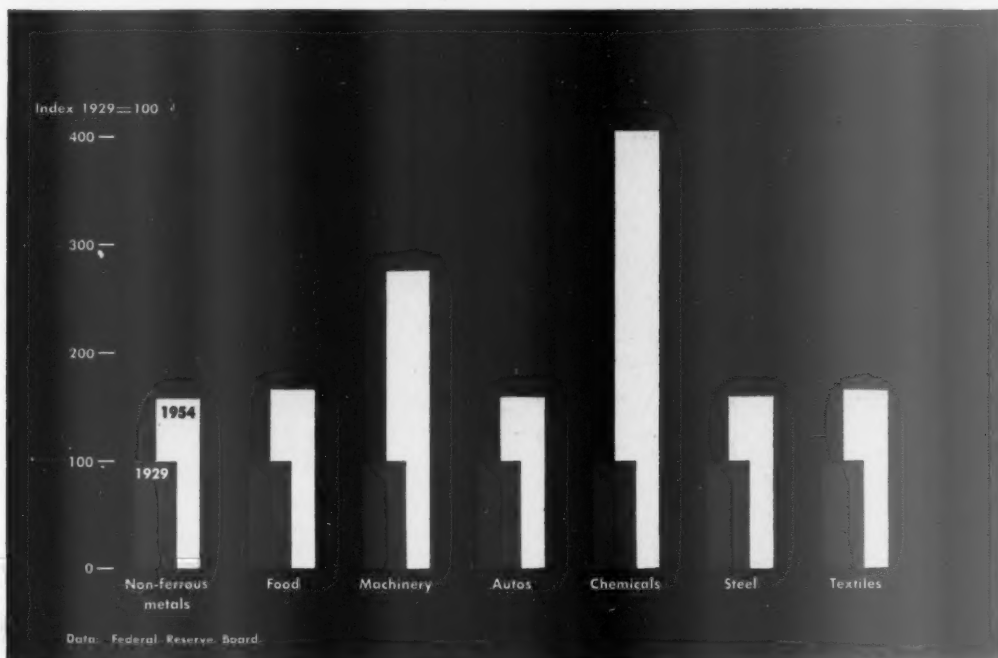
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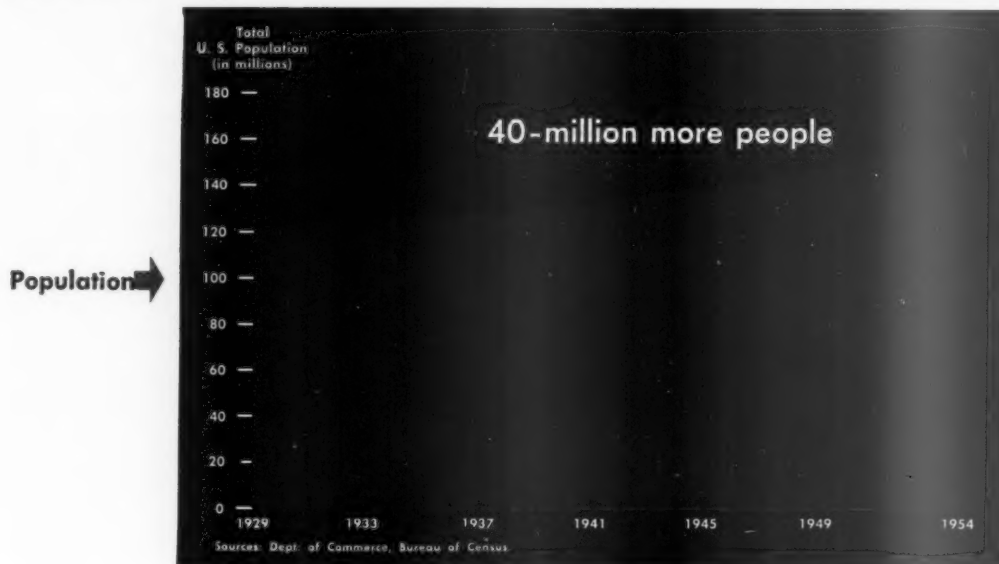
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Twenty-Five Years Have Brought Big



The Labor Force



are laid bare. Add to these the wary eye of the Federal Trade Commission and of special government bodies such as the Food and Drug Administration or the Federal Power Commission that supervise individual industries; then add to all this the ever-present possibility of an impromptu Congressional investigation into a particular company or industry. No one can call this privacy.

• **Atmosphere**—But perhaps the most startling change of all is that, while all management has become more or less reconciled to such fish-bowl operations, a sizable proportion actually welcomes the new conditions.

Neither the public nor the govern-

ment can be snubbed any more. Business inherited a tremendous load of antagonism and antibusiness feeling from the Depression and the early days of New Deal political rhetoric. To a large extent, business is still trying to live this down. (Professional public relations has had its big growth since 1929.) From this point of view, the new open atmosphere is a healthy one for business—it absolves it of skulduggery in the public mind. The late Frederick Lewis Allen, one of the keenest observers of the times, put it this way: "A gold-fish has got to be good."

The modern corporation is faced with the constant necessity of justifying its

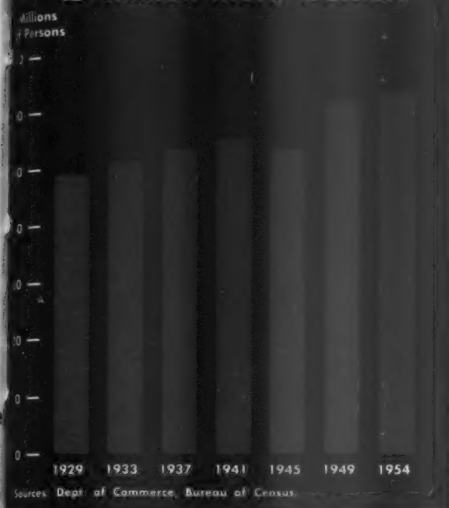
actions to the public. For instance, a large corporation closing down a plant will often jump through hoops to persuade the community that it has no choice (BW-Jul.31'54,p70). If possible, it will even take upon itself the responsibility of bringing in new industry to take up the slack.

• **Techniques**—These are shifts in the philosophy of running a business. There have been changes, too—radical changes—in the techniques. You can sum up these changes pretty accurately by saying that intuitive management began to wither in 1929, and systematic management grew in its place.

Partly, this is because the shock of the

Big Changes In...

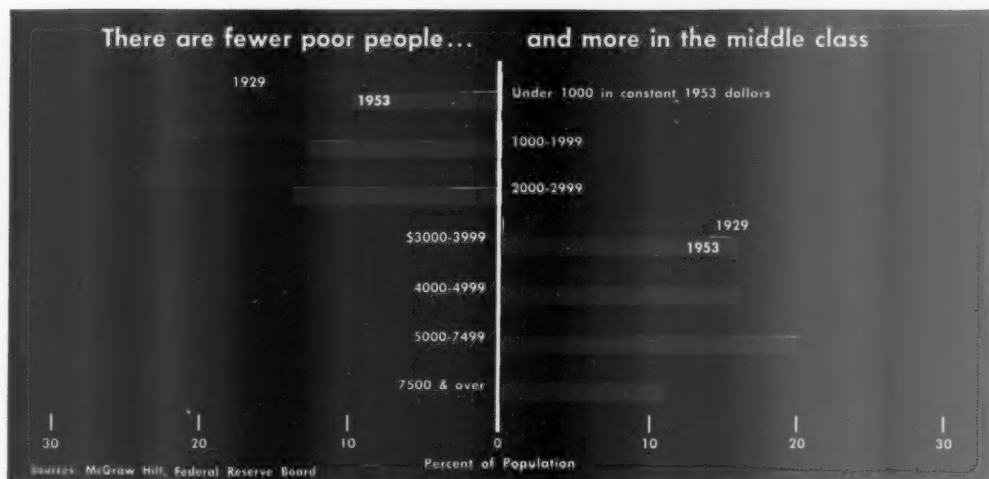
15-million more workers



Incomes



Income Classes



Behind these changes: the growth of industry

1929 crash and the deepening disaster that followed was enough to shake anyone's faith in intuition. But mainly it's because, since those times, individual businesses and the markets they serve have become so big, the scope of management responsibilities so broad, and the tools of management so varied that the executive job has simply outgrown the ability of a single, decision-making, administering head.

So we now use the systematic approach, instead of the seat-of-the-pants approach. We have developed professional techniques of control and management, and we have acquired a professional managerial class to use those techniques.

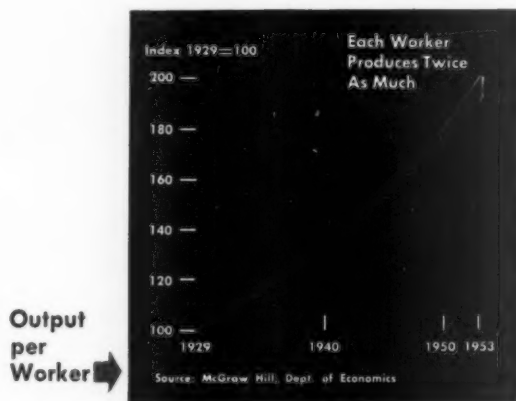
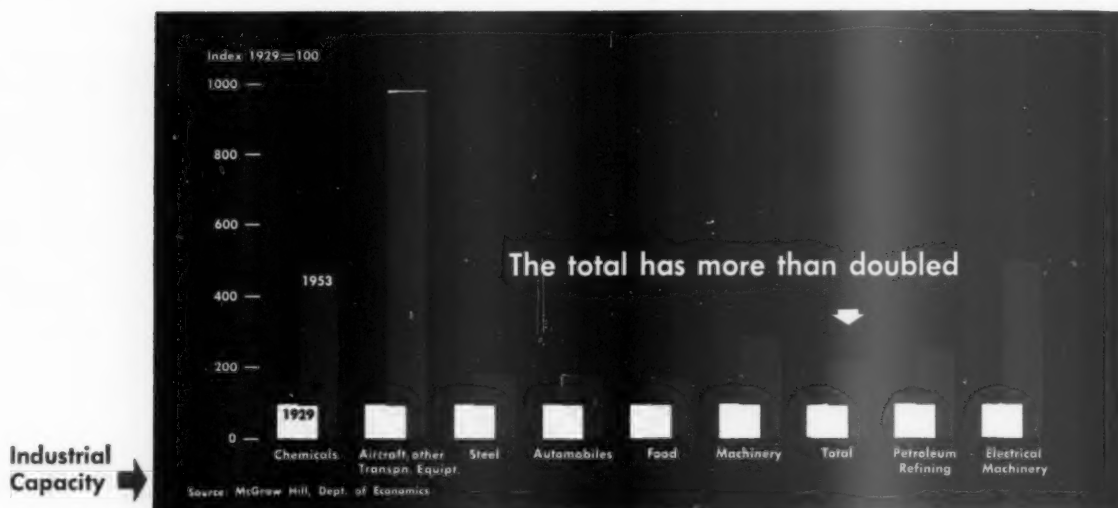
niques.

• **New Generation** — The professional business manager was comparatively rare in 1929. Twenty-five years ago Wall Street was the center of business life. Ambitious men knew that the prestige lay in finance. Business managers were often simply operating employees of the money managers, while the true titans of business were the financiers.

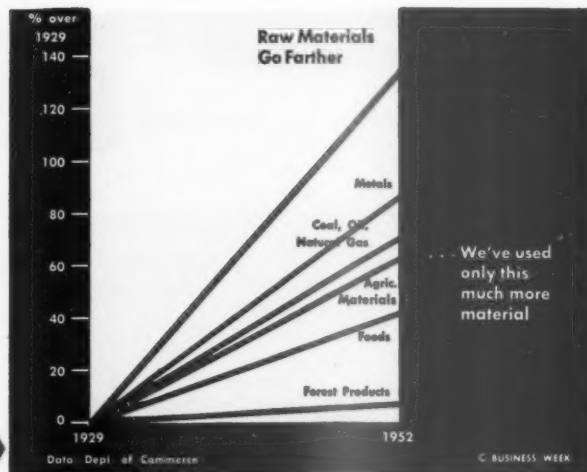
In 1929, the bright young college graduate entering a career in business headed straight for the nearest Wall Street firm. There he filled his briefcase

with bonds to sell—and he considered himself launched.

Today, bond salesmen are in short supply. And there, precisely, is the difference. The young college graduate these days goes first to a business school. There he becomes thoroughly familiar with all the ramifications of business management. Like as not, he also gets special training to make him an expert in a particular phase of management—perhaps marketing or personnel or public relations. When he leaves, he's ready to become what he set out to be—a pro-



Raw Materials



fessional business manager.

• **Contribution** — If and when he becomes one, he will enjoy a generous share of prestige—in some ways more than he could have expected in 1929. In the 25 years since the great stock market crash, professional managers have done much to endear themselves to the rest of the business fraternity, the government, and the public. They were the agents who released the tremendous productive potential of the U. S. economy to win World War II. Since then, they have earned much of the credit for the country's peacetime growth.

They are also responsible, in large measure, for the country's future. Long-range planning is part of their job. Much depends on their ability to do it well.

Their record to this point is good. Many an economist will tell you that the country pulled smoothly out of the 1953-54 recession mainly because management kept its nerve—did its forward thinking without panic, went ahead with plans for new plant and equipment in

the face of such ominous signs as rising unemployment and dwindling orders.

• **Demand** — Professional managers of high caliber are, perhaps, more essential to business today than ever before—because of the trend toward decentralization. When a company divides itself into several semi-autonomous parts, each of those parts must be headed by a man made of top-executive stuff. The more business decentralizes, the more managers it needs.

General Motors Corp. pioneered in decentralization long before 1929. The trend will probably continue for many years. The advantage of decentralization is that it allows a big company to maintain the same clear-cut lines of authority,

and move with the same speed, as a small company.

But even in a company made up of semi-autonomous divisions, there has to be a system of strong controls emanating from the central offices. This need for controls has fostered the development of new information techniques to keep central management informed of goings-on in the divisions. The immense masses of data that flow to the center of a modern corporation must be sorted, analyzed, assimilated, and eventually translated into policies and plans. More and more, the burden of this work with data is falling to machines. Companies are beginning to experiment with big, super-intelligent computers.

Labor: Era of Change

In the last 25 years, relations between labor and management have undergone a revolution which, in some places and some ways, continues still. The era now closing opened in 1929 with the Amer-

ican labor movement an anachronism in the world. In every other industrialized nation organized labor was strong, established, and mature. Only here were the unions scattered and weak; confined,

in their operations and their influence, to the very edges of the economy.

In 1929, public policy towards labor was essentially passive. The government took few active steps to suppress unions on its own initiative. On the other hand, it placed no restraints on employer efforts to do this; and it often helped employers when they asked for help. Employers had the initiative in the battle to keep industry free from organization.

• **New Deal**—The great change came in 1932. Two events that year initiated it.

The first was the passage of the Norris-LaGuardia Act, which took away from the federal courts their power to restrain union activity by injunction, and its signing into law by President Hoover.

The second was the election of Franklin Roosevelt as President and the coming of the New Deal.

The New Deal cultivated labor support to an extent never before approached in American political history. Yet while the law and the political climate certainly encouraged unions to organize, it did not fully account for the tremendous upsurge in unionism.

• **Failure of Nerve**—Management in this period, lost the initiative. In the New Deal's political rhetoric, business was used as a scapegoat for the depression that brought Roosevelt to power. Whatever self-doubts assailed businessmen as a result of the crash were deepened as they were held up to scorn by the President and his party.

Many writers and analysts, describing the psychology of the businessman in this period, have referred to "the failure of nerve." On the labor front, business seemed to be suffering a paralysis of will as well. Its resistance to the new unionism was sporadic, thoughtless, and panicky. It shifted violently from aggressive-ness to abject resignation.

In any event, the 1930s saw an unprecedented growth in union membership. By 1940, the unions were 12-million members strong. Great new institutions, wielding vast economic powers, were operating in mass-employing, mass-producing industries.

• **Taft-Hartley**—America entered the war with the union movement one of the great powers in the land. Then came the no-strike pledge and the National War Labor Board to adjudicate disputes. By war's end the unions had gained another 3-million members and had secured themselves throughout heavy industry.

Late in 1945, unions began a series of strikes that, over the next 12 months, established a towering new record for the amount of work-time lost in America through labor disputes. So widespread was the strike movement, and so much public apprehension did it cause, that union activity became a prime issue in the Congressional election of 1946. The Republican Congress then elected felt it

held a mandate to change national labor policy and reform union practices. In 1947 it passed, over Pres. Truman's veto, the Taft-Hartley Act.

Taft-Hartley represented a new phase in public policy. It was not a complete revision of the Wagner Act's encouragement of collective bargaining. Nor was it a return to the earlier period of passive toleration—or to the period of union suppression before that. Its practical effect was two-fold: It made it harder for unions to organize and penetrate new areas, and it put on unions a heavier legal responsibility for their actions.

• **Recovery of Nerve**—But more important than the law itself, in the perspective of the last 25 years, is what it symbolizes in "the recovery of nerve" by management. An equally monumental event, and equally symbolic of management's new mood, was the cost-of-living escalator contract that General Motors negotiated in 1948. The tone of the negotiations showed that the nation's biggest manufacturer, dealing with the biggest of the new unions (the United Auto Workers), had taken the lead and had succeeded in making collective bargaining a two-way street. Instead of fighting a rear-guard action, it wrote the kind of union contract it wanted.

Then, with the 1952 election, management felt an added surge of confidence in its ability to put across its point of view on the labor front. Now there are signs that some sections of the business community may try to press their advantage too far, and that a serious reaction may set in. But, in this constant seeking for a balance, most of industry seems willing to go along with Pres. Eisenhower in a program of moderation. It is a program that tries to reconcile the sometimes conflicting interests of employers, unions, and the public.

• **"More"**—What manner of unions do we have after this 25-year revolution?

The unions that grew here in native soil have never become attached to a Marxian blueprint or a Utopian vision. The keenest analysts of the American labor movement long ago defined its objectives as "more." At different points in the last 25 years, the "more" that labor sought lay in different directions—more wages, more time off, more improvements in working conditions, more security. But the shifts in demands were tactical rather than strategic changes.

In the early and middle 1930s, the unions' main job was to establish them-

selves in hitherto unorganized mass-production industries. All efforts were bent, accordingly, toward achieving recognition. Demands for more money were centered on what, in the slogan of the day, was called "correcting substandard wages."

• **Fringes**—By the early 1940s, having achieved recognition, the unions centered their attention on getting what was known as "union security." They were eager and anxious to bulwark their bargaining position and shore up their membership rolls by making union membership a condition of employment. At the same time demands for more money were advanced to "keep wages in pace with the cost of living."

Before the war was over, however, federal controls on inflation put ceilings on what the unions could do to raise wage rates. So the demands shifted to a whole series of what became known as "fringe" benefits—such items as paid vacations, 15-minute rest periods, pay differentials between shifts, life and health insurance, pension plans. Questions of a guaranteed annual wage also began to come up more and more often.

Bargaining on fringes opened up a whole new area for collective bargaining. This area is not yet fully explored, and its limits are not yet fully known. But the 1950s may become known as the decade of welfare bargaining.

• **The New Mood**—All this means that there has been a basic change in the process by which a large number of highly important decisions are made. Many vital areas of policy are no longer the property of management alone. In these areas, where management could once make decisions by itself, labor must now be given a say.

At one time, for instance, a company could decide that its employees should take only half an hour for lunch instead of an hour. Having made the decision, it could post the order on a bulletin board—and confidently expect the order to be observed. Today, a company with organized workers would hardly dare to be so blunt. In all likelihood, it would sit down with the union and try to strike a bargain; the employees might agree to take a shorter lunch hour, but they would demand something in return.

This trend is likely to continue. Management will find that there are fewer and fewer things it can order its workers to do, more and more areas in which it must negotiate.

Machines Do It Better

In the quarter-century before 1929 the great development in U.S. factories was the assembly line—an idea embodying two principles:

• Instead of moving people around to work on products, you let the people

stand still and move the products to them.

• Instead of letting one man build an entire product, you assign many men to the job—each man doing one specific operation.

Though the assembly line was a form of mechanization, it still used people. In the 25 years since 1929, the dominant line of development has been in the direction of doing as much as possible without people. The art and science of going through as many stages of production as possible with as little human help as possible is called automation.

• **Engineer's Dream** — Fully automatic factories are still rare. Mainly they're confined to industries such as chemicals, petroleum refining, and some foods—industries where the product is fluid and you need only a kind of high-grade plumbing to carry the materials from one processing step to another.

But nearly every industry, in the last 25 years, has felt the impact of the new technology—whether it's more automatic handling of materials, more automatic feeding, loading, machining, waste disposal, or inspection. Bring each of these new techniques to the peak of automatic perfection, put them all under the same roof in interlocked production lines, run them all in a smooth flow by a system of automatic controls, and you have the engineer's dream of the fully automatic factory. This will be the next step in the growth of many industries, and undoubtedly the main line of development for the next 25 years.

And why all the emphasis on "Look, no hands"? Largely because labor, in the last 25 years, has become relatively scarce and very expensive. Wages are now up so high that in many cases a costly piece of labor-saving equipment looks like a bargain. And skilled labor—at any price—is hard to find.

• **The Machines** — Furthermore, there are some processes that machines can perform more skillfully than the most skilled worker. As products become more complicated and tolerances more finicky, as materials become more specialized and therefore more sensitive, automatic methods become more useful. They cut the chance of human error.

Also, for most jobs, machines are faster than human hands. When tremendous volumes of a particular product are needed, and especially when the time is limited (as in World War II), machines usually will do a better job. It's essential, of course, that the engineer keep a smooth flow going through the factory. It does no good to be making bolts at the rate of 5,000 an hour if the nuts to go with them are coming off the line at the rate of 2,000 an hour.

• **Upgrading** — Automation has become increasingly popular as the labor force has been upgraded by better education and more income, and has been given a wider choice of jobs in a full-employment economy. It has become harder and harder to find workers for the dirty, boring, backbreaking jobs in industry. This alone has been a tremendous spur

to making factories more automatic.

At the same time, automation has itself played a big part in upgrading the labor force. There simply is no longer much place in the economy for the strong back and the weak mind. For one thing, it takes a high degree of skill to run many of the new machines. For another, the problems of maintenance multiply as the machines get more complicated, and good men who can keep these machines in working order are at a premium. So the maintenance man has been graduated into a kind of junior engineer—and, like as not, he has gained his new skill in on-the-job training by industry.

• **Trouble** — But there are problems in automation too—and the closer you get to a fully automatic setup, the worse some of these problems get.

One problem is the lack of flexibility. The more automated a production line, the more it tends to become rigidly bound to turn out a standardized product. Even a small change might require junking whole banks of tools. One solution envisions tooling in interlocking blocks or gangs; sections of the line could be changed to suit a new size or product, while the main part of the line could be kept intact.

It's a tricky job, too, to keep the robot plant under control. The man running a plant loses touch with the machinery when it's remote and automatic. Control rooms have become more and more complicated; yet if something goes wrong, the engineer has to be able to spot the offender quickly among a maze of dials and measuring devices. The problem is one of human engineering—getting control systems that the human mind and the human eye can work with.

• **Index** — How widespread is this substitution of machines for people? You can get a good idea by looking at a single statistic—the amount of electric power used in manufacturing over the years.

Between 1945 and 1953, manufacturing production went up by 24%. The number of production workers went up by 5%. The number of kilowatt-hours of electric power used in manufacturing went up by 63%.

What It Means

In the last 25 years, every business in the United States has been reshaped by all these factors: social change, economic shifts, government policies, new management theories, the labor revolution, innovations in production machinery and technique.

Here BUSINESS WEEK analyzes the impact of these factors on seven industries that are basic in the nation's economy: steel, nonferrous metals, machinery, autos, chemicals, textiles, and food processing and marketing.

Twenty-Five Years Have



Steel: Never

The steel industry over the last 25 years has been almost all things to all men:

- To the general public, it has been a symbol of business—its stacks belching smoke in good times, standing cold and derelict in the Depression.

- To our enemies in World War II, it meant a shower of bombs and shells, more tanks and guns and ships and trucks than they could comprehend—or withstand.

- To the postwar economy, it was a provider of both guns and butter—of surprisingly abundant civilian goods on top of an arms buildup.

- To the investor, over the 25-year haul, it was something of a dog.

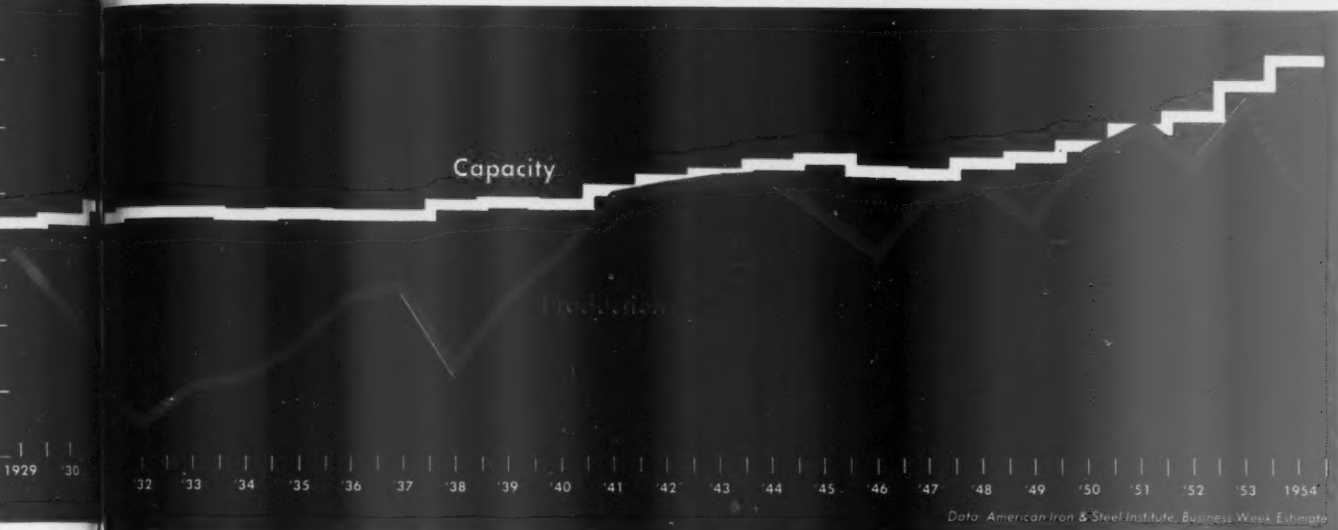
- To organized labor it was, in many respects, a daisy.

- **Hectic Business** — Throughout the quarter-century, the steel industry produced about as useful an industrial material as the United States had. It had scarcely a peaceful moment doing it.

Steel production (chart above) almost always fluctuates more widely than the economy as a whole. And steel earnings have often been more erratic than production.

Operating at close to 90% of capacity, the trade was doing well in 1929. Three years later it was down to less than 20%, then spent the next three years at under 50%. In 1937 it was operating at 73% of capacity; the 1938 recession brought it down to 40%. It boomed through the war years at over 95% (in fact, has run over 90% of capacity in nine years out of the last 14). But the comparatively mild 1949 re-

Have Brought Big Changes In...



Data: American Iron & Steel Institute, Business Week Estimate

a Peaceful Moment All the Way

cession brought a drop from 94% to 81% in the operating rate.

Now look at earnings. A four-year stretch, 1937-1940, emphasizes how volatile steel earnings are. In 1937 the industry earned \$232-million; in 1938 it lost \$15-million; in 1939 it earned \$147-million; and in 1940 it earned \$281-million. Worst year for the steel industry was 1933, when it lost \$60-million. Best year was 1950, when it made \$767-million.

• **Fluctuations**—There are reasons why earnings jump around so much—reasons that cause headaches aplenty for the men who run the business.

For one thing, steel carries a whale of a fixed investment in plant. The way to make money is to get as close to running that plant to the hilt as possible. When you have to let part of it stand idle, it starts to get pretty expensive. Even if the idled portion is your least efficient and costliest to operate, you have capital tied up non-productively, which is bad.

For another, steel, to a large extent, has to produce and carry its own raw materials—something that manufacturing industries generally don't do. So when the economy tapers off, steel begins to take on the perils of an extractive industry. It sits at the beginning of that long lead-time that an automobile or a refrigerator represents. It has to hold tremendous inventories—of ore, coal, scrap, and limestone—either in the ground or in the stockyard. And, again, it has to maintain the fixed investment to get those materials, in good times and bad.

So steel has gotten itself the reputation of being a "feast and famine" industry. As a result, it has had a fairly dismal 25 years on Wall Street. Less than a year ago, the stock market valued the securities of one of the trade's most profitable producers (National Steel Corp.) at slightly less than just its postwar investment in plant. And as recently as last May, it valued the plant of the top 10 producers at about 20% of replacement cost.

• **Technical Progress**—In spite of the ups and downs in production and the coolness of the investing public, steel has come a long way since 1929. It has enlarged capacity tremendously—and has improved it substantially besides. For example, in 1929 the trade used 334 blast furnaces to support 57.4-million tons of iron smelting capacity. Last year, 258 stacks supported 79.4-million tons.

Technology, as well as larger size of units, helped this advance. The last 25 years have seen the Bessemer converter drop from 13% to 4% of steel-melting capacity, the electric furnace rise from 2% to almost 9%—a solid gain for steel quality.

• **Wide-Sheet Mills**—Technologically, though, the greatest progress came in steel finishing, and a big part of that progress is centered around the continuous wide-sheet mill. This was perfected in 1924, but it had its greatest growth in the depression decade of 1929-39, when obvious cost advantages brought the new mills in with a rush—22 of them, installed by a dozen producers in 17 states. Now, some 45%

of the industry's hot-rolled product takes forms made possible and economical by the development of the continuous wide-sheet mill.

One glimpse at the economics tells the story. In 1923, the year before the first mill was installed, cold-rolled 20-gauge sheet sold for \$135 a ton, though the average wage paid to produce it was only 59.6¢ an hour. Last year the price was down to \$95.50 a ton, while labor costs were up to \$2.63 an hour.

This mill, giving auto makers much wider sheets to work with, allowed them to concentrate on style as well as utility. It helped the home appliance industry get off the ground. It made tin cans cheap and plentiful. And it made, and is making, the steel business a lot of money.

• **Product Shift**—Productwise, the industry has changed a good deal since 1929. Sheets, of course, come to a much bigger share of the total now. Tinplate, long one of the industry's favorite products, has grown steadily in output since 1929.

Another product that has served the industry well is pipe, particularly those kinds of it that are used by the oil industry. Since this is usually high-quality pipe, the profit margin is better than average—and the market keeps growing fast. Development of an economical, dependable way to make large-diameter pipe that would contain high pressures opened up another tremendous new market—long-distance natural gas transmission. This market has been booming since World War II.

• **Rival Materials**—But steel has not

been having everything its own way.

Aluminum, after a vast war and post-war expansion in capacity, now has its output figured in terms of tons rather than pounds. Aluminum has already moved ahead of stainless steel in one sparkling new market—metal-clad buildings—and it's giving steel some real competition in others (BW—Aug. 14 '54, p130).

Plastics' main inroads on steel, so far, have been in the field of pipe, particularly where light weight and corrosion resistance are important. Also, plastic dies are now being used, and there's considerable talk about plastic auto bodies. But, in terms of total steel output, the competition, so far, is still infinitesimal.

• **Labor—**Employment costs, in the steel industry, have quadrupled since 1929. There are two main reasons for the spurt: (1) The general currency inflation since 1940, and (2) the almost complete organization of the industry by the United Steelworkers of America.

For years, the steel industry reveled in the great myth that no union would ever organize steel. And up to 1929, no union ever had. At that time, three separate unions among them represented less than 2% of the steel industry's workers.

Then came the National Recovery Act and the Wagner Act. Under their protection the United Mine Workers organized and manned the Steel Workers Organizing Committee. The job of organizing the industry swung into high gear.

What happened after that is history. U.S. Steel electrified the industry by signing voluntarily with SWOC in March, 1937. Then came the bitterness and violence of the Little Steel strikes. One by one, the lesser producers also signed. By 1941, it remained only for a major holdout, Bethlehem Steel, to sign up with what was by then the United Steelworkers of America—and the union organization of the steel-producing industry was virtually complete.

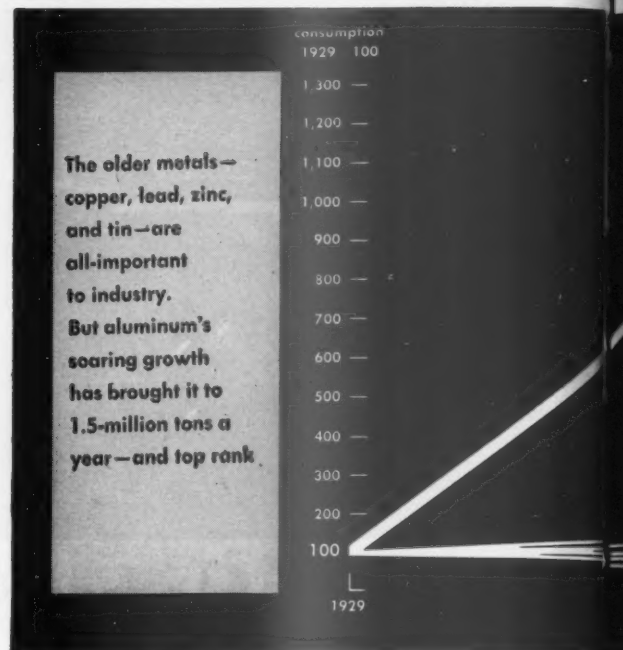
• **Better Jobs—**Through organization, the steel worker has gotten more money, job security, and bargaining position. And he has also found the industry a safer, less unpleasant place to work than it used to be.

More work is done by machines, less by muscle. There are still a number of hot, hard jobs, particularly in the steel-producing departments—jobs for which you need tough skillful men rather than boys. But such jobs are far fewer than they were a generation ago.

There have been three industrywide strikes since 1941. But in most of the time since then, steel and its union have been learning each other's ways peacefully—to the benefit of both parties.

Twenty-Five Years Have Brought Big Changes In...

Nonferrous Metals →



The Wonder Metals: Still

What has happened in metals over the last 25 years has been nothing short of a revolution.

As the industrial machine moves along faster and faster, it gobbles up our supply of metals at an ever-increasing rate. As long ago as 1940, this country changed from being a net exporter of nonferrous metals to being a net importer. But more important than the change in statistical position has been the change in thinking.

• **Exhaustible Supply—**In 1929 nobody gave much thought to the supply of metals; most of them were taken as much for granted as the sun and the air. Today, the future of our metals supply comes up for worried discussion wherever men gather to study the country's resources. And necessity has driven us to working more and more with lower grade ores.

For example, handling 0.6% and 0.7% copper ores was unheard-of in 1929; today, ores of such low content are getting into use quite commonly. And the cream has long since been skimmed off this country's lead and zinc ores. For all three metals, leaner ores mean sharply rising costs of extraction.

• **Newcomers—**This has encouraged the rise of competitive metals. One fast comer is aluminum, which in 25 years has grown from lusty childhood to full-sized leadership among nonferrous

metals. Aluminum has created brand-new markets for itself. It has also taken hefty bites out of the established markets of copper, lead, and zinc.

But the most exciting developments in the last quarter century have been in the field of the newer metals—metals that in 1929 were little more than symbols in the periodic table.

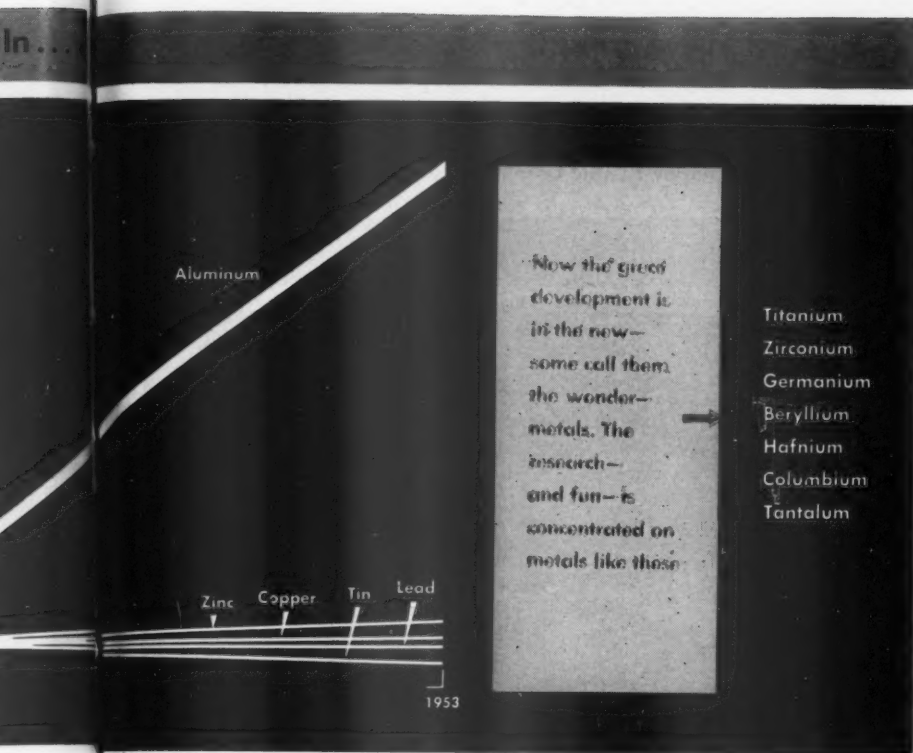
The needs of an expanding technology have promoted a worldwide chase after better metals that can withstand ever-greater stress at ever-higher temperatures. And the demands of national defense have given the chase a feverish urgency that it would never have had otherwise.

• **From War to War—**You can start almost anywhere in the story of expanding needs.

An urgent World War I necessity was better steels for valves in aircraft engines. We started by adding chrome and silicon to our best carbon steels. Later, nickel was added. These yielded high-temperature iron alloys that helped make the internal combustion engine dependable.

In the 1930s, we developed turbo-superchargers for aircraft engines. These operated off exhaust gases at stresses and temperatures we still weren't ready to handle.

When World War II made us willing to pay 50¢ a lb. for valve steels, develop-



Still a Long Way to Go

ment really took off. Tungsten and molybdenum were added to chrome-nickel grades. This did nicely for the engines that won the war. But it wasn't adequate for jets. First cobalt, then nickel began replacing iron at the same time the turbine buckets and vanes of jet engines replaced valves.

In the postwar race for more compact, more powerful, longer-lived jet engines, metallurgists succeeded in getting somewhat more power and longer service life. But they are still having trouble raising the operating temperatures high enough—and that's where the big prize lies.

• **Special Effects**—It's the special, unusual properties that make the new little-understood metallic elements so attractive. One will have a very high melting point, another an excellent strength-to-weight ratio; still another will be ductile at high temperatures. Today, there's an increasing tendency to study promising elements—for the specific properties you need—in their pure form. Then you study how to maximize their good points, remedy their deficiencies by alloying.

For example, the push for a ductile material with a high melting point turned up molybdenum as very promising for use in jet engines. But at very high temperatures molybdenum oxidizes to a white powder. Intense re-

search is going into finding a means of protecting it. Ceramic coatings haven't been entirely successful. Now nickel is being tried.

Then you have the carbides, also with high melting points and with admirable resistance to oxidation at high temperatures. But carbides are brittle. So research is aimed at overcoming that deficiency.

National defense demand alone is severe enough so that vast public funds and economic incentives of various kinds have been lavished on research and development of these new metals.

• **Titanium**—About the most spectacular new metal is titanium. Scarcely six years old as a commercially pure metal, it is flying today in the most advanced aircraft we know how to build. It's far from being thoroughly exploited. Aside from defense, potential industrial demand—provided price can be gotten down low enough—is tremendous.

Beginning near zero in 1948, titanium production has shot up to around 7,000 tons this year. Planned capacity, already on the books and contracted for, comes to 15,000 tons annually. And the federal government has set a goal of 35,000 tons annually in 1957.

Contrast this with aluminum's early growth. Only after 25 years of commercial production did aluminum out-

put get even as high as 22,000 tons.

• **Forced Feeding**—This kind of forced growth for titanium has been costly. One expert figures that the U.S. Air Force has spent—including research, engineering, and development—some \$200 per lb. for the titanium that's flying today.

The spur, of course, is titanium's beguiling properties: good corrosion resistance, excellent resistance to shock, better hot-strength than aluminum, and one of the very best strength-to-weight ratios of any metal. But experience with titanium has yielded an insight into the kind of effort that's needed to master these strange new metals.

The trade, for instance, is full of talk about airframe and engine builders who have found titanium failing mysteriously even before it was used. One of the commonest complaints concerns its lack of uniformity. Considering how it's produced—in small batches and by the most advanced techniques—this lack of uniformity is not surprising. But considering its cost (\$10 to \$20 per pound for mill products) and its limited uses now (mainly in aircraft), it's plain that titanium producers are going to have to master all these fierce, even weird, new problems before the metal will begin to realize its potential.

• **Price of Purity**—Another important fact about these new metals is that you require degrees of purity distressingly beyond the range of conventional metallurgy of only a few years ago.

A tiny increase in contamination of these metals works profound changes in their characteristics. And they are insatiably reactive with oxygen, nitrogen, hydrogen, carbon. They're of little value—other than as ferroalloys—unless they're pure, and you purify them mainly in vacuum processes.

Ton for ton, vacuum-melting capacity is a lot more expensive to build than, say, open-hearth capacity. And it's much more expensive and tricky to operate. So we're going to pay through the nose for the new properties that our technology is demanding in metals.

• **Zirconium**—Right now, the best-known among other flashy new metals is zirconium. Its excellent corrosion resistance gives it a good potential as piping for the chemical, petroleum, and pharmaceutical industries. But at \$10 a pound, its price is still much too high for wide industrial use. You get some idea of the pace of development, though, by comparing that \$10 a pound with its cost in 1948—\$70 a pound.

Zirconium's most interesting property—and the one that has been the main spur to its development—is its low neutron absorption. This, together with its corrosion resistance and light weight, makes it close to an ideal structural metal for nuclear reactors. So, right now, zirconium's future seems to be

tion tied with the future of atomic power.

• **Producers**—All manner of companies have had a hand in this drive for new metals. Chemical companies have done, and are doing, a big part of the basic research. Metals companies such as National Lead, New Jersey Zinc, and Kennecott Copper are also doing research.

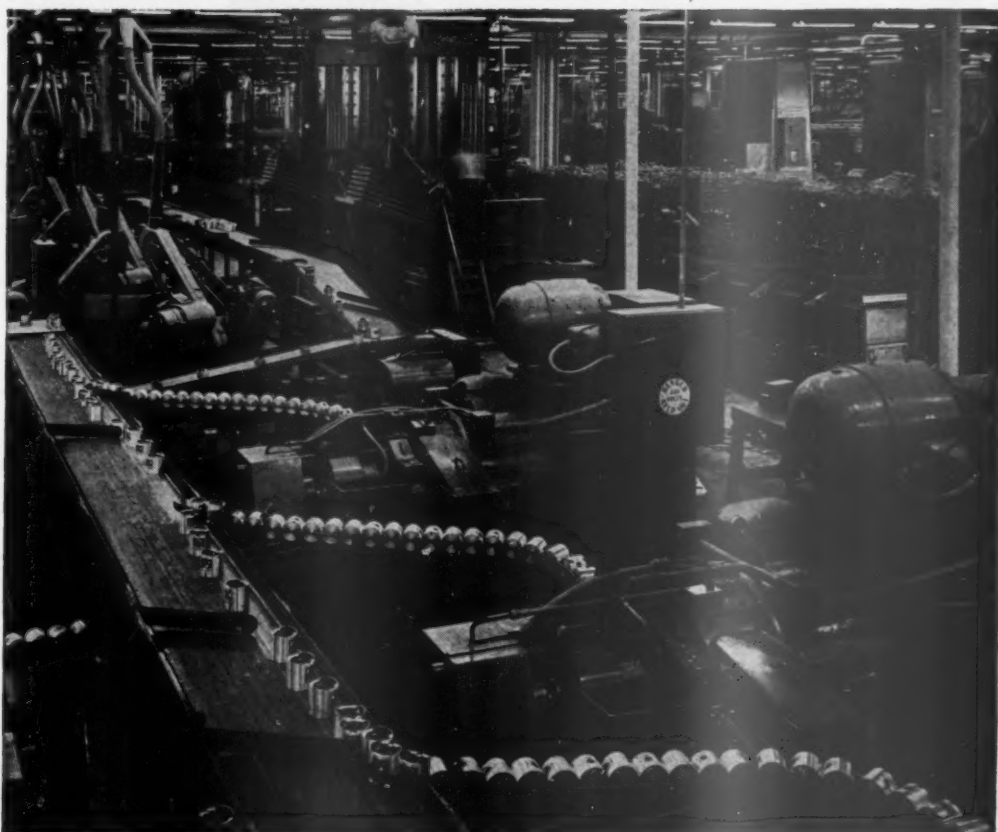
So are the electrical industry and the aircraft engine builders.

Once a metal reaches the fabricating stage, it is the steel companies, by and large, that are stepping forward to do the job—in titanium, for example.

In such cases, the steelmaker's interest is obvious. He already has the ex-

pensive specialized equipment with which to make useful shapes from raw titanium metal. He can add this new revenue-producing activity with a minimum of investment. Moreover, the specialty steelmaker has every reason to plunge into titanium—as a hedge against its threat to stainless steel.

Twenty-Five Years Have Brought Big Changes In...



Machinery



Automation—It's Coming Everywhere

The machine operator turning out a piston of your automobile engine 25 years ago was in full command throughout the process. His skill at the machine controlled the dimensions of the piston. The accuracy of the product was a function of the operator. He was supreme.

Today, the machine turning out that piston (picture) doesn't need the operator's guidance as it works. The piston's dimensions are preset in the machine; the machine can decide for itself when the exact dimensions and shape are reached, when to stop the process. Accuracy is not a function of the operator, but of the tool designer.

• **Typical**—On a one-product scale, that

tells what has happened to machine tools and production machinery—as well as in mechanization of materials handling—as industry has moved faster and faster toward automation.

The trend shows up more dramatically in a new boring machine for stator housings for jet engines. Using 55 carbide tools, at about 600 hp., this many-armed monster does at one clip for 90¢ what used to cost \$1,200, take hour after hour of finicky work. It condenses a 20-acre plant into 20 sq. ft. It costs half a million dollars—but replaces \$52-million worth of machines.

• **Intricate**—This is the sort of thing that has brought vast changes in the machine and metalworking industries.

The industry, once relatively simple, has become extremely complex, requiring a tremendous variety of materials to be machined to close tolerances. Sometimes these are so close (down to one-fiftieth the diameter of a human hair) and the speed so fantastic (something like 15,000 rpm. on some new milling machines) that they are far beyond the capacity of the human eye and mind to understand.

The industry must aim for the utmost flexibility. In effect, it must at the same time think in two different ways, produce in two different ways, set up two kinds of equipment. For civilian goods, it must have the tools to whack out, say from plastic or sheet

metal, products designed against cost for simple mass production at the lowest possible figure. But for defense materials, or for possible war emergency, it must be able to turn out, on short notice, hard-to-form weapons and parts, produced under rigid requirements but in high volume—the best product obtainable, regardless of cost.

I. Growth Era

Machine tools have moved toward these goals with increasing speed during the quarter-century, but in zigzags rather than in a constant upward curve. Flagging markets of the Depression years brought one redesigning spurt, with the new models getting into general use just before World War II. Postwar, the first real design advances came in 1947.

• **Power and Speed**—The spectacular growth of automation—in making machine processes automatic, in providing tape or electronic controls, in automatic materials handling—has multiplied many times the appetite of machines for power. There was a time when it was possible to power a whole batch of machines from a common source through a plantwide system of drive shafts and belts. Now each machine has its own self-contained power source—often a motor for each movement.

This has made for a big boost in speed of machine tool operation (up 50% since World War II), in higher feeds to match machine speed, in even bigger boosts in horsepower (doubled since the war).

II. Materials Handling

Machining has become so efficient that much of the emphasis has shifted now to reducing time for loading and unloading. This is going on in two directions. One is automation of the single machine, so that it is loaded and unloaded automatically. The second is shuttle or transfer mechanisms that combine several operations and shift the part from machine to machine.

The transfer idea is 15 or more years old, but got into the picture in a big way only since World War II. The pioneer was the auto industry, which uses a transfer machine to do many machining operations in one crack. It's also used for some appliances.

• **Mechanized**—Transfer machines were unknown 25 years ago. Few individual machines then were automatic. And many metalworking processes now done by machines were considered hand operations.

Take welding. With automatic welding, auto frames are welded five times as fast as they were by hand. Whole sides for railway cars have been made by machine welding. Ultrasonics, or vi-

bration at a speed faster than sound, has come along to give greater uniformity and strength to the weld.

Assembly machines can now tighten bolts to predetermined strength in two-fifths the hand time, at one-sixteenth the cost. Automatic cleaning machines, using ultrasonics, reduce a several-hour job to five minutes on jet engine parts.

III. Mechanical Brains

Fast machines are eliminating the work of the human hand in these processes, and the human brain is also finding mechanical substitutes. They work faster, tirelessly, more accurately.

The idea of the robot as a creature to free man from drudgery—or as the bogeyman in a nightmare world—long antedated the fact of automation. Automatic control of machines has been familiar to engineers for years on such things as automatic screw machines, tracer-controlled lathes. In fact, it goes back 150 years to the invention by J. M. Jacquard of a loom controlled by punch cards.

Now the principle is being applied to machine tools. Extremely complex pieces can already be made from tapes prepared on a computing machine—and it may not be long before such methods can be used to “teletype spare parts anywhere.” The development of reliable electronic equipment makes it possible to compute a control tape without first making a single piece of the product.

Basically, tape or punch card control is in the near future for machine tools. But it is easier to apply to punch presses, cutting torches, and the like, where tolerances are not so close and motions are simpler.

IV. Nonmachining

In the quarter-century, machining processes have become so fantastically intricate and so expensive that shops look for other ways to do the same work. This has caused a small boom in such nonmachining processes as presswork, molding, stamping, punching, extrusion, cold forming.

Paradoxically, however, the volume of machines and tools required for these methods and the processing of the resulting high-strength parts have combined to multiply the amount of machining done. While machining per part is less than 25 years ago, total machining is far greater.

Products today have more pieces, too. A “small” car 25 years ago had perhaps 7,500; now it has 15,000 or more. And the parts are bigger, more complex, requiring more machines.

Presses are now used in one-third of all metalworking plants; the number of mechanical presses jumped 11% from 1949 to 1953, hydraulic presses 21%

in the same period. Die design has advanced, too, so that many presses can turn out parts that need no finishing, even if hole-spacing or dimension is in ten-thousandths of an inch. New forming processes have come along, such as making a refrigerator case by wrapping a sheet around a collapsible form, then pulling out the form and welding the sheet.

Even threads on production objects are now made by rolling, or forming, instead of by machining.

V. New Wonders

Some of the newer nonmachining processes sound as if they came out of the imagination of a science fiction writer. The Impacter, for example, operates by throwing metal into shape as you'd throw mud against a wooden fence—the dies are on free pistons that meet in midair, stay together less than 1/3000 of a second.

In the same category are shell molding—using thin molds to produce more accurate, smoother castings at less cost than by machining—and the Tinkertoy project for making and assembling electronic circuits virtually without the touch of a human hand.

• **Materials, Methods**—Alongside these broad paths of development, there have been a host of other changes in machine tools and metalworking:

• **Introduction of sintered tungsten carbide** as a tool material about 25 years ago (it didn't really come into its own in civilian production until after World War II) made possible machining at many times greater speeds and feeds, with longer tool life, better finishes.

• **A quarter-century ago**, machine tools had only half a dozen materials from which to make their products. Now there are countless alloys.

• **Completely new cutting processes** have been developed: among them, electrical-discharge shaping of hard surfaces, electrolytic grinding of carbide tools, ultrasonic vibration for rapid cutting of hard surfaces, such as jewels, glass, stone, quartz.

• **Into the Future**—The word “automatic” has been the keyword of the past quarter-century, and it remains the slogan of the future.

In machine tools, the next step is already being taken—continuous and automatic inspection of the product, while it's being made, to correct any variation from the norm. Machine tools already exist with built-in inspection devices to signal such a variation—and even to stop the machine when some dimension gets outside the tolerance limits. The next thing you can look for—perhaps even by yearend—is machine tools that will go beyond this to make a correction without stopping the machine.



Autos

Wanted: Big New Markets

At some time today, millions of Americans will park their cars near grocery stores to do the weekly shopping. Tomorrow, they will bunch them outside churches and near golf courses. Monday, they will sweat and swear their way through traffic to and from work—just as they have been doing in ever-increasing numbers for more than 25 years.

In the quarter century, the use and purposes of the cars have not changed. The significance of the 25 years is found in the obvious: the acceptance of the motor car as a necessity.

• **Proof**—Last year, 70-million Americans drove their 46½-million cars more than 560-billion miles. Detroit turned out more than 6-million new passenger cars, and industry economists foresee an annual market of between 5½-million and 6½-million cars over the next five years. To prepare for long-term growth, car manufacturers will spend over 20% more on new plant and equipment this year than they did in 1953.

Where will this big new market come from? The experts are divided. Some think it will come by selling some type of "second car" to families that can afford it; others say by selling "more car per car"—that is, more gadgets. Needless to say, the industry is pushing on both fronts.

• **New Fields**—In the long run, however, it's hard to see how the auto industry can continue to expand indefinitely at the present rate, unless it goes into completely new fields of consumer

products. And that is exactly what may happen. No durable goods industry has such widespread outlets for its products, or such ready access to the nation's capital markets. So, despite talk of a saturated car market, the auto industry will probably keep right on growing. Ten years from now, it may be making helicopters, or prefabricated houses—or merely cars that are as big as houses.

• **Front-Seat Driver**—The man behind the wheel seldom reflects on the role of the car in his daily life. Nor does he ponder much on the effect he has had on the auto industry. But few economists will argue the point that the American motorist, speeding along superhighways or bumping over country roads, has taken the automobile industry apart and fitted it back together—with small surface resemblance to the industry of 1929. His wholesale acceptance of the auto and his desire to drive the latest model with all the gadgets have pointed out to the industry the two golden keys to success: production and distribution.

I. Production

By 1929, there was every sign that the automotive industry had reached maturity. The assembly line had come a decade before. Now there was a demand for cars, and the assembly-line technique was there to meet it. But other things were missing. Automatic, high-volume production of components was developed to fill one gap.

Then, too, more workable steels had come out of World War I. The closed car was partly due to better alloys and better ways to fashion them. Safety glass came along in 1925 to overcome one objection to closed cars.

• **The Real Spur**—There was, of course, one other spur that made the high production attainable. It was so deceptively simple that even as smart a motor man as Henry Ford missed it. It was a model change every year. Any automobile leader today will tell you that the annual model change is the one thing more than any other that has brought the industry to its present size.

But as production began to catch up with demand, that brought on problems. Until then, used cars had presented almost no problem, because there was a market for almost any kind of car. Now, however, used cars imperiled new car sales. So manufacturers and their dealers had to set up merchandising plans to handle the used cars that were traded in on new ones. Then, too, by the late Twenties, millions of dollars were being spent on advertising.

As a result of all this, the automobile was solidly entrenched in American life before the collapse of 1929. Between 1929 and 1932, the value of car purchases fell 74%, but expenditures on gas and oil dropped by only 18%. Miles driven continued to rise through 1932. Using the car had become part of American living.

II. Distribution

In 1929, there were a score of car manufacturers. Today, there are six. And there may never again be more than the present number, even though car ownership continues to soar. After the war, a few newcomers tried to crash the industry; all but Kaiser failed.

It wasn't simply a matter of customers' preference. The essential element—and the chief reason why a newcomer in the auto business is doomed—is distribution. It's also the reason why the smaller companies have had to combine.

It takes a fantastic amount of capital to enter and stay in the automobile business, but—other things being equal—capital could be obtained. Production techniques in auto manufacturing are no secret, and can be matched by many companies. Engineering and design are more difficult to come by, but not impossible.

• **The Catch**—But, says Detroit, it's the dealer who calls the tune. Good dealers are rare and elusive. It takes years to set up an efficient distribution system—and in the meantime the prod-

uct is likely to wither on the vine.

In 1929, when nearly 4-million cars sold at retail, there were about 43,000 dealers. Today, there are still only the same number. With the return of competition, few in the industry think there is much hope for a new producer to crash the magic circle of dealers. As Harlow H. Curtice, president of General Motors, points out, distribution is the key.

• **Wobbly Prop**—One of the important props of the present distribution system has been the exclusive new-car franchise. But, looking ahead, both motor makers and dealers see so-called "bootleggers" threatening the underpinnings of the system. These operators are feeding on and gaining strength from another peculiarity of the distribution system—transportation charges.

When a franchised dealer sells a new car for resale by a used car dealer at a cut rate, the auto industry calls it "bootlegging." In the appliance industry it is called "discounting."

The auto business is a natural for the discounter because of the practice of charging the customer freight costs that often bear no relation to actual transportation costs. General Motors and Ford—and to a lesser extent other manufacturers—operate branch assembly plants to which car subassemblies are shipped at a lower rate than it would cost to move the complete car from the parent factory. (Two-thirds of cars today are assembled outside Michigan.)

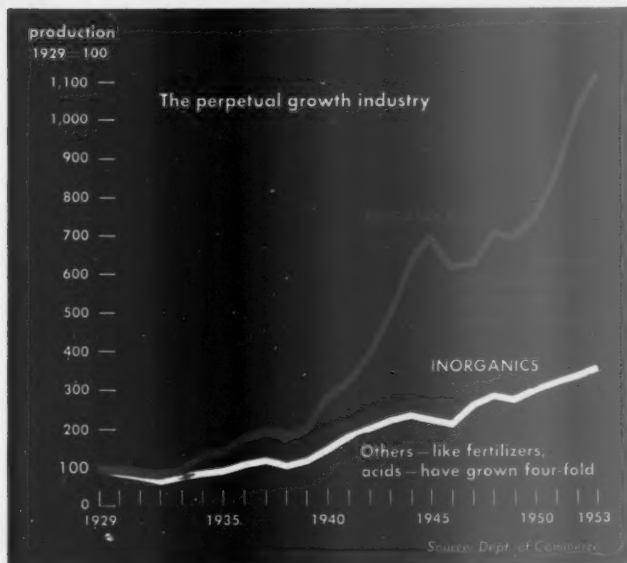
"Bootlegged" cars, bought from franchised dealers near the parent factories, are moved cheaply over the road to non-franchised dealers, who can then reflect the difference in transport costs in a lower price to the customer.

So far, the National Automobile Dealers Assn. hasn't been able to persuade Justice Dept. to approve changes in franchise agreements that might wipe out bootlegging.

• **Justified**—But whatever happens in the distribution setup, the habits of the American people seem to justify Detroit's plans for annual production of at least 5-million cars. There is one reservation: the condition of the nation's roads. It's estimated that it will take \$6-billion a year for the next 15 years to fit today's roads for tomorrow's traffic.

Probably nothing indicates better the state of the auto industry's maturity than Detroit's belief that the best way to catch up on highway needs is the toll road. Even five years ago, the idea was abhorrent—it might have dissuaded someone from buying a car.

Chemicals →



No Growth Limit in Sight

Forty years ago, the United States didn't have a chemical industry worthy of the name—the German industry so dominated the world that U.S. chemical production was negligible by comparison.

Twenty-five years ago, a U.S. chemical industry was well established, though only a handful of the companies were really big. In 1929, value of chemicals and allied products was about \$3.8-billion. The products were relatively simple, unglamorous, workaday chemicals and a few equally unglamorous plastics.

Today, the chemical industry is growing still bigger, more complex, more important. In 1953, value of chemicals and allied products was \$19.9-billion—more than five times the output a quarter-century ago (chart). And the products, turned out by some of the nation's biggest and richest companies, are incredibly complex and varied.

• **Versatile**—Of the two kinds of industrial growth, the qualitative change is even more spectacular than the quantitative. Time was—25 years ago, for example—when anyone who had taken high school chemistry was familiar with the leading products of the chemical industry. Today, a highly trained chemist has trouble keeping up with the newest products.

The newer chemicals are complex, versatile. Consider the silicone family. You can find a silicone that's good for waterproofing, another silicone that can make a material more susceptible to

wetting. By choosing among its basic materials, the chemical industry can virtually tailor-make a product to the use you want to make of it.

Few industries are so obsessed with the need for new products as the chemical industry is. Sales people preach that at least half of company sales should come from wholly new products. That's a fast pace, but it pays off in quicker development of a glamorous new product into a bread-and-butter item. Silicones are going through this transformation now.

• **Expansion**—In 1929, the industry operated in a much narrower field, with a nervous eye on the still powerful German chemical industry. Under the protection of tariffs, however, it gave vent to its ambitions from 1929 on. A wave of mergers built up the leading companies, broadened the range of their output, improved efficiency and profits. Suddenly, chemicals became a blue-ribbon growth industry.

Through vertical integration, chemical processors gained closer control of their products, from source to ultimate user. For example, a company might make sulfuric acid; it bought the sulfur, burned it to make the acid, and sold the acid to big users, such as the steel industry. Sulfuric acid is a fairly simple product with a good market, so many other companies got into the business. Competition drove prices down, and profit margins, too. To cut costs, the company might integrate vertically: It might buy a sulfur mine, thereby get-

ting raw materials cheaper. Or, to boost profits, it might go into manufacturing agricultural sprays from the copper sulfate it could produce from its own sulfuric acid.

The industry thus gained the size and maneuverability to make a research program worthwhile. Until the 1930s, the industry had few big laboratories, and those concentrated on day-to-day problems rather than long-term research. For the basic research, the industry still depended on European—particularly German—experience. By now, the U.S. industry is the pacesetter, not the follower.

• **Bigger Market**—The integration of the industry came just in time to take advantage of the broadening of the chemicals market. This growth took two forms:

- A gain in demand for basic chemicals. As population increased, more chlorine was needed for water purification; as the automotive industry grew, more chemicals were needed for rubber, lacquer, and antifreeze, for processing gasoline and oil that the new outpouring of cars use.

- A new market for products that are wholly chemical: detergents, synthetic fibers, plastics, synthetic rubber, paints, pharmaceuticals, fertilizers. The chemical industry today is no longer a mere supplier of raw materials—it now produces consumer products that are made wholly or largely from their own materials.

For years, soap manufacturers bought only caustic soda from the chemical companies, to treat the fats they bought elsewhere; now synthetic detergents, entirely a chemical industry product, outsell soap. Similarly, in 1929 the chemical industry supplied the textile people with alkalies and dyes; now more than 20% of the textile output of the U.S. is entirely a chemical product—synthetic fibers.

• **Booming Petros**—Many of today's "miracle" chemicals come from the young branch of the industry known as petrochemicals. These products are derived from oil and natural gas, and the industry has boomed in the Southwest oil-gas fields.

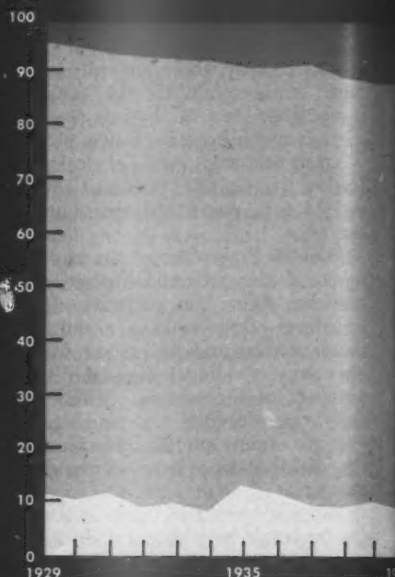
In 1929, petrochemistry was limited chiefly to producing small quantities of commercial alcohol. Today, its annual sale of probably \$750-million or more represents about one-fourth of all U.S. production of basic chemicals. Chances are good that its output will double in the next 10 years.

More than half of the increase in output of this type of chemicals between 1938 and 1952 came from Gulf Coast plants, largely war-built. There's still room for more growth: Petrochemicals still use only about 1% of the available annual output of oil and gas.

Twenty-Five Years Have Brought Big Changes In

Textiles →

Per capita consumption of textile fibers



The Synthetics Threaten

A Rip van Winkle who dozed off in the textile market 25 years ago would hardly recognize the industry today. Some of the big company names would sound familiar, but not their products. Half the list of most popular fabrics would mean no more to him than Martian doubletalk, for they weren't invented until recent years.

This chart reflects the impact of synthetic fibers. There isn't a textile mill anywhere in the country that hasn't somehow felt the effect of these chemical wonders. Without doubt, the synthetics are the big textile story of the last 25 years.

• **Some Old Troubles**—One thing hasn't changed much in 25 years: the industry's list of problems. Much as it was in 1929, the industry is still trying to cope with its chronic overproduction, low profit margins, lack of effective merchandising, foreign competition.

Today, to be sure, it's a bigger industry. It has nearly half again as many mills as in 1929, and the value of their product has gone up three and a half times. But the textile industry is still the classic example of what comes of a lack of "bigness" in business.

Burlington Mills, J. P. Stevens & Co., and Deering Milliken & Co. are the three largest mill groups in the industry, in both sales volume and number of mills. Yet none of the three,

before the spring and summer consolidations, produced more than 2% of the total volume of textiles. None of these is big enough—in the sense that General Motors is big enough—to exercise some control over its own destiny.

Profit margins in the industry are held low by small operators who can always "make it for less," while trading on the research and promotion effort put into a product by the big mills. This leaves the big mills with less incentive to do long-range research and development; at the same time, low profit margins cut their ability to do these jobs.

• **Mergers Then and Now**—The series of mergers earlier this year when Burlington Mills, J. P. Stevens, and others acquired controlling interests in other big mills, was an attempt to deal with the problem of smallness. While neither firm is in the billion-dollar-gross class yet, both Bur-Mil and Stevens are halfway there.

In number, these latest mergers don't begin to match those that went on during the 1930s. Along with everything else, the textile industry had been hit hard by the depression. By 1932, nearly 1,000 mills had gone out of business, and the total value of products was down by 50%. Mergers then became a lifesaving device.

Synthetics

cotton

wool

1945

1950

1953

Data Textile Economics Bureau

to Take Over

This year's string of mergers were a form of horizontal integration—between companies in the same branch of the business—but the mergers of the 1930s were mostly vertical: Mills moved “forward” to take over selling houses, or selling houses moved “backward” to take over mills.

There were also many horizontal mergers in the 1930s. Small mills merged with other small mills at the same stage of manufacturing but producing different products and located in widely separated communities. Thus they spread the impact of a drop in demand for one product line, both for themselves and the community, and they gained new flexibility.

• **Wide Open**—The textile depression abruptly ended with the approach of World War II. Overnight the industry put its looms to work on uniforms, tarpaulins, tents, webbing, parachutes, and powder bags. The war rush provided millions of dollars that the mills needed for modernization after a long depression and for replacement of the machines worn out in war production.

After the war, textiles continued to boom as soldiers turned eagerly to civvies and women gobbled up nylons by the dozen. The mills' long-needed modernization and expansion drive hit stride. From 1945 through 1952, mills spent \$3.7-billion for new ma-

chines, new mills, new air-conditioning and other auxiliary equipment.

• **“Miracle” Fibers**—It was then, too, that the readjustment to new manmade textiles was speeded up.

Rayon was the miracle fiber of the late 1920s; its name was coined in 1929 as a substitute for the despised term “artificial silk.” By whatever name, women loved it, despite its then shiny luster and comparatively poor properties. Here was silk's luxury feel and look at a bargain price.

The swift acceptance of rayon was the making of many a big name in the industry today. Burlington Mills' J. Spencer Love invested \$2,000 in a rayon mill in 1930 and parlayed it into the nation's biggest textile chain, with 75 mills and annual sales of \$361-million—not counting the recent Pacific Mills and Goodall-Sanford acquisitions (BW—Jul.17'54,p32). It wasn't until the 1940s that Burlington produced a fabric from anything but rayon or acetate.

• **Share of Market**—Over-all, what has happened in fibers? Total consumption per capita has gone from 25 lb. a year in 1929 to 36 lb. in 1953. But cotton and wool have just about held their own; nearly all of the increase in per capita consumption went to the synthetics. On a share-of-the-total basis, cotton is still king with 67% of the market (chart). But the synthetics have gone from just under 4% to just under 24% of total per capita consumption.

• **Why the Shift?**—The main reason for the success of the synthetics, of course, is that the consumer likes them.

Another reason is that industry, generally, likes them. The built-in, engineered, controllable properties of the synthetics make them appealing to industrial-fabric designers who must consider specifications for strength, stretch, toughness, or resistance to chemicals. Tire cord is a prime example. It all used to be cotton. Last year, 85% of it was made of either rayon or nylon—or both.

Finally, textile men themselves went for the new fibers in a big way. The main reason was price stability. Unlike wool or cotton, synthetic prices don't depend on crop yields or weather conditions; their long-term trend is downward, and, more important, they remain stable over long periods of time. In running a cotton or woolen mill, success depends as much on how “smart” you buy your raw material as on how “smart” you run your mill. The price stability of the synthetics takes a lot of the risk and headache out of running a mill.

• **Side Effects**—On production methods and production men, the impact of the synthetics was tremendous. You just can't handle the new fibers as you do cotton or wool, and their develop-

ment has done more than anything else to turn textiles from an art to a science.

Mills became cleaner places to work, mill workers were upgraded, engineering of fabrics was accelerated because mills had engineering materials to work with, air-conditioning became widespread, and machinery was refined.

• **A Look Ahead**—What's the future fiber picture? A lot of chemical companies are feeling mighty optimistic about it. Not only are the current producers developing new fibers and building new plants, but companies not now producing fibers commercially are also experimenting with new fibers.

Total capacity for producing synthetic fibers has been estimated at 2.7-billion lb. in 1955—double the 1952 consumption figure. And, taking a look at population trends and per capita fiber consumption trends, experts figure that by 1970, synthetic may account for 40% of U.S. fiber consumption.

• **Labor Trend Down**—Despite the growth in total volume of textiles produced, textile employment has actually declined. And the number of textile spindles in place, the usual yardstick of productive capacity, has been steadily shrinking.

The reason, of course, is higher productivity per worker and per spindle, mostly as the result of improved machinery. 1929 was the beginning of a trend toward eliminating many of the repetitive processes required to get fiber into yarn and fabric. Over the years, by consolidation of processing machines and steady improvement of the quality each produced, steps have been eliminated—and machines and workers, too.

• **The South**—Along with the changes in production has come the big change in the locale of production. The growth of the industry in the South, and the movement of mills from North to South that began in the early 1900s, was moving along steadily in 1929. The depression encouraged the trend. Today, the South claims about 80% of the textile industry.

Last holdout to the southward movement has been the woolen and worsted industry, which is still largely in the North. But even this segment of the industry is being forced southward or out of business by lower-cost operations down South.

The trade thinks the big flow of woolen and worsted mills to the South is still to come. But the migration got a big boost this year when two big makers of wool tops announced plans to build plants in South Carolina to scour wool and process it—the first mills of this type in the South. The wool will be landed at the port of Charleston, S. C., which may, in future years, displace Boston as the great U. S. port of entry for wool.

Food: Revolution in the Shopping Bag

► The typical family today can afford to eat better than 25 years ago, and it does.

► Preserved and prepackaged foods that were scarcely dreamed-of in 1929 are commonplace on the store shelves today.

► Distribution methods are undergoing a similar upheaval, with sharp competition from and among the supermarkets. The big change to come is in manufacturing.

One thing hasn't changed since 1929: Food is still the country's most essential industry. All other businesses must keep an eye on the nation's food budget (now \$67-billion a year), for not until after man buys food does he buy other things. As the relative cost of food goes lower, more disposable income is left for the rest of the economy.

The food industry is a vast catch-all of farmers, fishermen, ranchers, packers, processors, packagers, transporters, commission merchants, grocers, chain-store operators, roadside hucksters, and peanut vendors. In all its branches—producing, processing, distributing—it employs some 10-million persons. These people range from clam shuckers and “stoop” laborers up to Lingan A. Warren, who makes \$300,000 a year at Safeway Stores, Inc., and Arthur Godfrey, who makes still more, just for reading commercials.

In 25 years, the balance among all these people—their relative importance—has changed sharply. And therein lies the big story of the industry.

• **1929 Style**—In 1929, butchers and truck farmers still peddled their wares from door to door. Downtown there was a greengrocer, a fancy grocer, a baker, a fish store, an ice cream parlor, and a couple of chain stores. Suburban driveways were worn thin by delivery trucks, and a few horsedrawn wagons. City dwellers relied on the butcher's boy and the grocer's boy and pulled their deliveries into the kitchen by way of the dumbwaiter.

If the housewife went to market instead of telephoning, she did it in the daytime, the only time the stores were open. She sat on a tall stool and read her marketing list to a clerk who scurried about with a hook, pulling down each item and assembling the order on the counter. Many of the items he had to weigh out and package himself.

If the family was above the lowest economic level, the housewife had a full-time girl to do all or most of the cooking. The meals that came out of the kitchen were heavy, starchy, and—for company—elaborate. In many homes a cake was baked every day. Much of the bread was home-baked, too. In winter, salads were unheard-of; away from water, fresh fish was rare.

Perhaps 5% of the population ate small steaks or loin lamb chops for lunch and a rib roast for dinner. A much, much larger group ate thick salami or cheese sandwiches for lunch and spaghetti or stew for dinner.

• **1954 Style**—Five minutes at the checkout counter of a supermarket will show a parade of foods unknown—in present form—to housewives in 1929. A factory worker's wife pushes a heaped cart to the checkout station. In it: a precut, prewrapped rolled roast of beef, boxes of frozen vegetables and frozen fruits that aren't in season, a giant can of chow mein, jars of baby food, sliced bread, canned soft drinks, premixed French dressing, raw vegetable salad mix, half-cooked rolls, frozen meat pies, canned new potatoes, packaged fresh vegetables already trimmed and weighed, instant coffee, one-serving boxes of cereal, and frozen orange juice.

The worker's family is eating better than the rich man's family did in 1929—more nutritiously, at least, and no less lavishly when it comes to out-of-season foods. In the social revolution, the average American has upgraded both his paycheck and his tastes.

The trend is toward nonfattening, easy-to-prepare meals, partly because people are diet-conscious, partly because they can afford the convenience. Few families have domestic help, yet leisure has become an inalienable right. The housewife knows she's paying a

premium for frozen meat pies, but she wants the extra time to devote to her children, to watch TV, to have a cocktail with her husband.

• **Trying to Catch Up**—A quarter-century of change in tastes and buying power finds food processing and distribution still trying to catch up with the times. Here's what has happened:

• High labor costs have led to more self-service, eliminating many clerks and delivery boys.

• Self-service has demanded more and more prepackaging.

• The two together have brought a rapid rise in the chain supermarket, which carries every kind of food.

• To supply the supermarkets more efficiently and to guard against seasonal ups and downs, food manufacturers have broadened their lines. They are “food companies” instead of, say, dairies or flour millers. In a few years, food manufacturing has left the domestic science kitchen stage and advanced toward a highly engineered, mass-producing industry.

• **Narrow Margin**—Packaging, refrigerating, and freezing have reduced spoilage, helping stores to slice markups. Severe competition between specialty stores and chains and between rival supermarkets has kept the profit margin thin—below 3% on the sales dollar. It's hard to cut distribution costs.

The alternative is to cut manufacturing costs. It is here that the big changes of the next 25 years are expected. The trend is toward bigger and more efficient plants.

Seen from within, the food industry is a big market for the products of other manufacturers. Yet, despite the engineering and research talent available, other industries have barely scratched the surface of food processors' needs for better machines.

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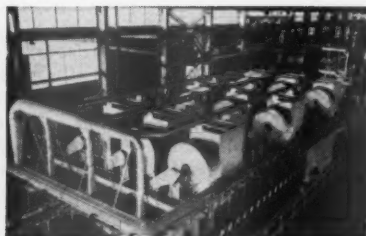
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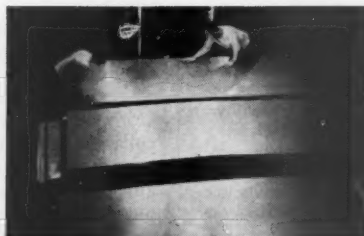
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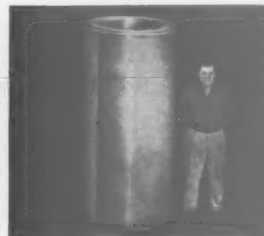
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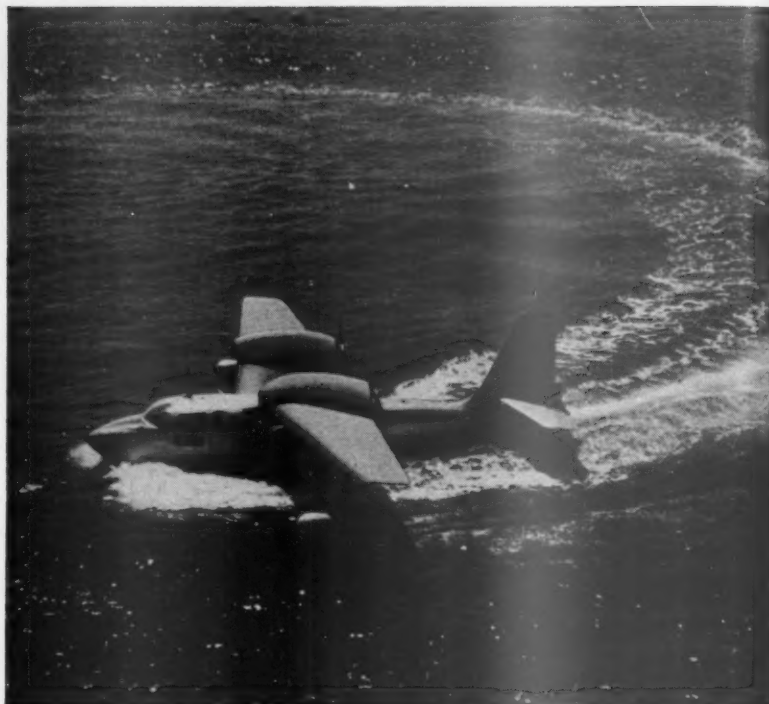
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Planes With Foreign Accents

Two airplanes, designed and partially built by European manufacturers, will soon enter the U. S. market. One of them will try to replace the old DC-3.

Two companies—one a newcomer to the aircraft industry—jinketed abroad this summer and returned with plans to produce new type planes from components built by European companies:

- **Kearney & Trecker Corp.**, Milwaukee machine tool maker, formed an affiliation with an Italian plane manufacturer, **Piaggio & Co.**, to turn out a twin-engine, five passenger job, the **Royal Gull** (above). Piaggio will build the airframes and wings, ship them to Milwaukee, where K&T will assemble them.

- **Fairchild Engine & Airplane Corp.** announced this week that, in collaboration with **Fokker** of the Netherlands, it would produce a twin-engine plane to replace the DC-3, the old two-engine work horse of the airlines.

- **K&T's Job**—Kearney & Trecker's plane—which will be turned out by the company's new, wholly owned subsidiary, **Royal Aircraft Corp.**—is designed for sales to business corpora-

tions. The plane has pusher-type propellers that give a sea level speed of 180 miles per hour, has a cruising range of seven hours, can take off in 18 seconds and climb to 3,000 ft. in three minutes. It can land on water or on land.

- **Take-Off**—K&T's entry into the air industry, which has always been highly competitive and never too profitable in peacetime, may seem a trifle quixotic. But **Francis J. Trecker**, company president, says he decided on the venture primarily because of "low investment, low risk, and a fairly good profit potential." He pointed out that, by doing only the assembly operations here, he will save several million dollars in designs, tools, and other manufacturing facilities.

Trecker himself has always been an aviation enthusiast. After graduating from college, he got a job at **Pratt & Whitney**. In 1932, he got his pilot's license. His company has used planes for company purposes for more than



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
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10 years, and for several years Trecker and Lincoln Thomas, the man in charge of the company's planes, have rebuilt planes on their own. But Trecker emphasizes that the plane venture is not intended as a diversification for K&T. "It's just a chance to make a little money."

• **Curious**—Actually, Trecker fell into the deal with Piaggio almost accidentally. About 18 months ago, he saw a picture of the Royal Gull. On his next business trip to Italy he decided to stop off and learn more about the plane—more out of curiosity than anything else. It was a two-hour visit in the midst of a three-hour ship layover in Genoa. He talked with Dr. A. Piaggio, one of the brothers who head the firm.

During the interview, Trecker learned that Piaggio had just redesigned the plane and planned to market it commercially worldwide. Piaggio had already received offers from the U.S. to represent the firm, but no decision had been made except that Piaggio was planning to assemble the entire plane in Italy, building the airframes and wings and buying the 260-hp. Lycoming engines and other parts from the U.S.

• **Sales Pitch**—Trecker pointed out that this would be costly—shipping the parts to Italy, then shipping the assembled plane back to this country. Why not ship the Italian-made parts to the U.S. and assemble the plane here? Piaggio liked the idea; he already knew K&T, since he used some of its machine tools in his plant.

The deal was signed and sealed on the spot. Through its new subsidiary, K&T would buy the frames and wings from Piaggio, buy the engines and other parts in the U.S., and assemble the plane in Milwaukee. The K&T subsidiary would handle sales in North America and adjacent islands; Piaggio for the rest of the world.

• **Potential Market**—Trecker claims that the Royal Gull will be the only two-engine amphibian plane in the corporation executive class to be manufactured anywhere in the world. (Grumman Aircraft Engineering Corp., which used to be the big name in this field, has stopped making this type of plane for the commercial market, now produces only for the government.)

Trecker is sure that there is a substantial market for the Royal Gull. He cites Aircraft Industries Assn. figures that \$35-million of twin-engine executive aircraft were sold in this country last year. K&T hopes to sell a couple of million dollars worth annually.

Chief uses for the plane, according to Trecker, are in such operations as mining and timber surveys, petroleum search, commercial fishing and whaling, as well as ordinary business and executive use. For example, he points to offshore oil operations, which, he says,

are turning more and more to helicopters and old Grumman to transport workers about.

Trecker also says that the plane has a load capacity of 1,000 lb. more than similar twin-engine planes now in use, and that the speed is competitive with aircraft now on the market. So is the price, he adds. The Royal Gull will sell for \$65,000, compared with the \$59,000 to \$79,000 for similar planes.

• **Two-Way Deal**—"It's a good deal for Piaggio, too," says Trecker, "because it can reduce production costs and also receive much needed American dollars." Piaggio is an old-timer in the airplane industry. It was founded in 1884, started plane construction 38 years ago, now has four plants in Italy, employing about 6,000. It also manufactures streamlined railroad cars, coaches, freight cars, trolley buses, trams, tank cars, helicopters, and motor scooters.

According to present plans, an assembled model of the plane will arrive in the U.S. Sept. 15.

• **Commuter**—The only Royal Gull now in use—except in military service—is one bought three years ago by A. S. Onassis, the Greek multimillionaire shipping fleet operator. Onassis uses it on his private yacht for transit to and from whale hunting. A second Royal Gull was purchased by ex-King Farouk of Egypt, but was shot down and destroyed when several of his colleagues attempted to escape at the time of Farouk's overthrow.

• **Fairchild's Plan**—The other deal, between Fairchild and Fokker, involves the licensing of the F-27 Friendship and provides that any Fokker products—current or future—built in this country will be built by Fairchild.

The DC-3 has been needing replacement for a long time, and Fairchild feels that this Fokker transport is the one to do the job. Fokker hasn't flown a prototype yet, but one is being built. Operating cost estimates make it more economical than the DC-3 on a seat-mile or a ton-mile basis.

• **Rolls Royce Engine**—One interesting feature of the new plane is that it is designed to use the same turboprop engine—the Rolls Royce Dart—that will power the British-made Viscounts that Capital Airlines is buying (BW—Jun. 12'54, p161).

Fairchild will build the airframes from the F-27. Some components may be imported from Holland, but chances are that everything will be built here except for the power plants, which will come from Rolls Royce. According to the agreement, Fairchild pays Fokker a straight royalty per plane, and has the right to build and sell the F-27 in the Western Hemisphere, except in Brazil where Fokker has a subsidiary company. The plane will sell for about \$450,000.

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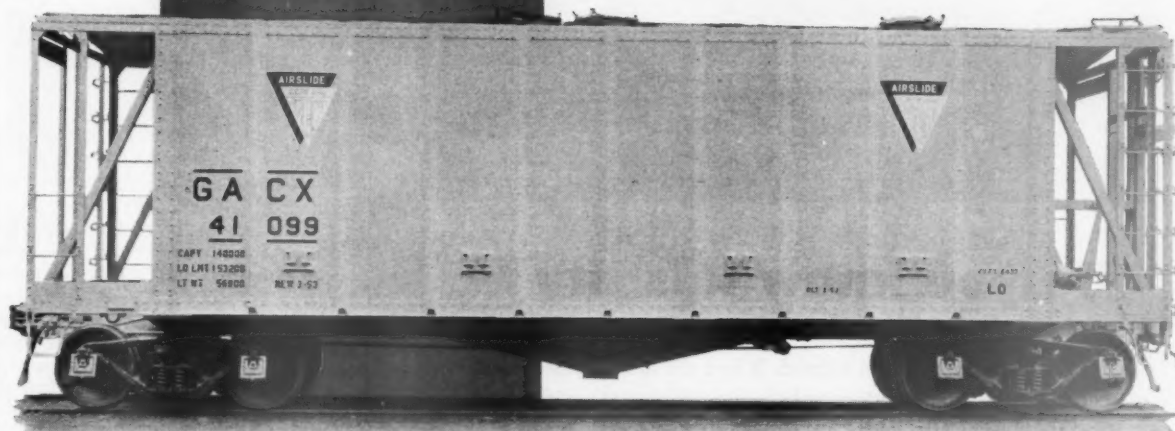


Photo courtesy General American Transportation Corporation

A corrosion-resistant vinyl coating supplied by The Glidden Company is helping General American Transportation slash refinishing costs on their new "AIRSLIDE" cars. With this new coating—based on BAKELITE Vinyl Resins—cars can be completely refinished in just one day under normal, outdoor conditions. And the coating resists chemicals and corrosion so well, it lasts up to 5 times longer than ordinary coatings.

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Texas Turkey Troubles

AUSTIN—Worried Texans are really talking turkey these days. Everything is "the biggest" in Texas, including the state's multimillion-dollar turkey crop. But psittacosis—a disease, also known as parrot fever, that affects many birds—might kill off many of the gobblers before the holiday ax can fall.

The Texas Poultry Improvement Assn. asked Gov. Allan Shivers for emergency help to wipe out the rapidly spreading disease (it can also infect humans). J. N. Murphy, association director of the state health department laboratory, said that all humans involved in the outbreak so far have recovered. But he added that psittacosis has taken a "terrible toll of turkeys."

Dr. M. T. Harrington, of Texas A&M College, notified the state budget board that it would have to spend \$32,000 on a research laboratory to study controls for the disease. The whole project would cost \$100,000 for the first year and \$75,000 the following year.

Texans annually receive about \$35-million from turkey sales, \$70-million from chickens, and \$200-million from eggs.

According to experts, the disease might spread through the entire poultry industry to wipe out large quantities of chickens, ducks, and eggs. Bad publicity from psittacosis has already affected poultry sales in general.

"Cut-to-Cost" Houses

MIAMI—In Coral City, a real estate development 13 miles from downtown Miami, last week people swarmed in from all over the state to buy more than 1,100 homes. At one point frantic salesmen were selling at a "house a minute" clip.

The cause of the Coral City stampede was the "cut-to-cost" price of the homes on the 3,200-acre site. Prices per home undercut the local market by as much as \$2,000. Buyers had a chance to see six home models, ranging from a two-bedroom-one-bath house at \$7,025 to a three-bedroom-two-bath home (with patio and carport) at \$8,650.

Local speculators are wondering just how the "cost" house deal will come out. Cause for their wonder is Ralph E. Stolkin, who is backing the Coral City project. Stolkin got his start running a punchboard syndicate in Chicago, selling his merchandise through the mails until the Federal Trade Commission called a halt. He



Loading a railroad train, Austria (1873)

You're cutting your costs with modern methods . . . Are you taking advantage of modern materials?

You're used to seeing a materials handling job done with safe, efficient, economical, modern equipment. But the conveyor belts and lift trucks that have replaced muscle power could be made only with new raw materials—from special alloy steels to man-made fibers—that have been developed since the turn of the century.

In an amazing variety of fields, improved processes and products have grown out of the imagination to realize the possibilities of today's new raw materials . . . such as Du Pont's man-made fibers. For instance, getting a mesh belt that would last in a tomato-peel-

ing machine was a problem for a canning plant. But when they put the strength and abrasion resistance of Du Pont nylon to work, a belt resulted that peeled 40 times as many tomatoes as conventional belting.

Even if you've never used Du Pont's man-made fibers before, take a look at the new properties they offer: strength with stretch . . . strength with little stretch . . . acid resistance . . . moisture resistance and other properties not always supplied by nature. Putting these versatile fibers to work for you presents a challenge—but a rewarding one

—to the research brains of your organization.

It will pay you to find out more about man-made fibers and the new efficiency and economy they make possible. Send for your copy of the fact-filled booklet "Du Pont Fibers—Raw Materials for Industry." Write to: E. I. du Pont de Nemours & Co. (Inc.), Textile Fibers Department, Section B, Wilmington 98, Delaware.

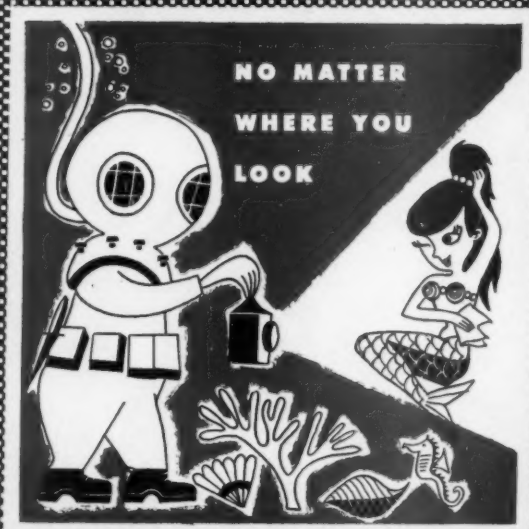


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pure white

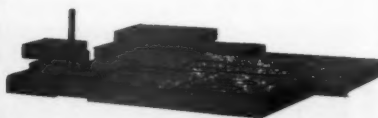
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FEEL BETTER... DRY FASTER, MORE ECONOMICALLY!

For example, Fort Howard Pure-White Singlefold towels are a real buy because Controlled Wet Strength keeps Singlefold strong and firm without loss of absorbency. Singlefold's Stabilized Absorbency provides effective drying power regardless of towel age . . . and Singlefold has sufficient body for maximum absorbency.

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For 35 years
Manufacturers of
Quality Towels,
Toilet Tissue and
Paper Napkins



FORT HOWARD PAPER COMPANY
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then tried to buy RKO from Howard Hughes. RKO stockholders forced him out. His partners in Coral City are builder Julius Gaines and Carl Byoir, publicity man.

Gaines claims the homes can be sold at close to cost because profits will come from land sales, rental of commercial property and sales of water and sewage disposal services. So far profits on land alone have topped \$2-million.

Two things have developed out of the Coral City bargain sale:

- Phone and mail response to advertising—especially from civil service and retirement groups—has been flooding Miami brokers' offices at a staggering rate.

- Local builders are finding themselves in a price cutting war in construction of homes under \$10,000.

Industrial Park Perks

TOLEDO—The Campbell Soup Co. and the Toledo Industrial Development Council have been trying (since February) to build the Midwest's first fully planned industrial park on a 118-acre site only a mile and a half from the city's Lake Erie docks. Now, it looks as if they can go ahead.

Interest in the park started when TIDC picked Campbell's land as the best spot for industrial development. Campbell bought the site in 1947 for a \$5-million processing and canning plant, which it never built.

TIDC picked the spot because it is adjacent to the Toledo Expressway, which feeds the Ohio Turnpike and is only a few hundred yards from 14 railroad systems. Everything looked perfect. The place was accessible to docks, highways and railroads. But there was one catch. There was no rail connection between the site and the 14 railroads.

Last week the cloudy situation cleared when the New York Central System, which owns a 30-acre plot next to the Campbell property, said that it would construct a connecting switch system into the industrial park. Engineers started to draw plans for the development which will be called "Expressway Industrial Park."

Gas in the Ballot Box

PITTSBURGH—The city government's political football will be heavily inflated with gas in this fall's election. The issue will involve the Peoples Natural Gas Co., the city, and the Public Utility Commission.

PNG is trying to get a \$5.3-million rate increase and the city is fighting it. The increase was applied for last September and has been suspended for

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study ever since. Last week the sus-
pension was to have ended and an in-
crease would have automatically been
added. But PNG voluntarily post-
poned the increase to give PUC more
time to study.

The city's government (Democrat)
has been fighting gas rate increases at
every turn—telling citizens that they
are delaying and often reducing rates.
The Democrats have pointed to the
state's Republican-controlled PUC as
being responsible for the gas hikes.
City officials want to make an issue out
of it this fall as part of a statewide
campaign to oust the Republicans.
Democrats say they have their best
chance in 20 years of winning the state.

So speculation is that PNG will let
the gas issue ride until after the elec-
tion to ease political pressure on itself
and on PUC.

Tied to the Tide

SEATTLE—Engineers wanted to
build a heavier bridge to replace the
old one crossing the Duwamish River.
But they found that the bottom was
coated with a layer of fine sand over
soft clay. This would not be a strong
enough mixture to hold the piers in
place, nor would it support the weight
of the new bridge's increased size.

Last week the engineers seemed to
have the problem licked when the con-
struction of "floating piers" got under
way. The piers will be flooded to keep
them in place. At low tide they will
be light enough to put just the right
amount of pressure on the soft bottom.
When the tide comes in, hollow cham-
bers in the piers will fill with water
to counteract the lifting effect. The
General Construction Co., undertaking
the task, says this is the first bridge of
its kind in the world. Final cost will
be \$6.5-million.

Update

MILWAUKEE—The fabulous Mil-
waukee Braves seem to be the team of
the year again in the National League
even though they aren't in first place.

Last week they topped the 1953 at-
tendance record (1,826,397 paid). The
record last year was tops in National
League history but Milwaukeeans took
it for granted by predicting "we'll leave
it behind next year when we win the
pennant" (BW-Oct. 3 '53, p122). Only
the attendance half of the prediction
is coming true but fans are undismayed.
They say "there's always next year—
we'll win the pennant and go over 2-
million."

Actually the Braves are expected to
draw better than 2-million before the
end of this season.

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**Save...
LIVES
PROPERTY
MONEY!**

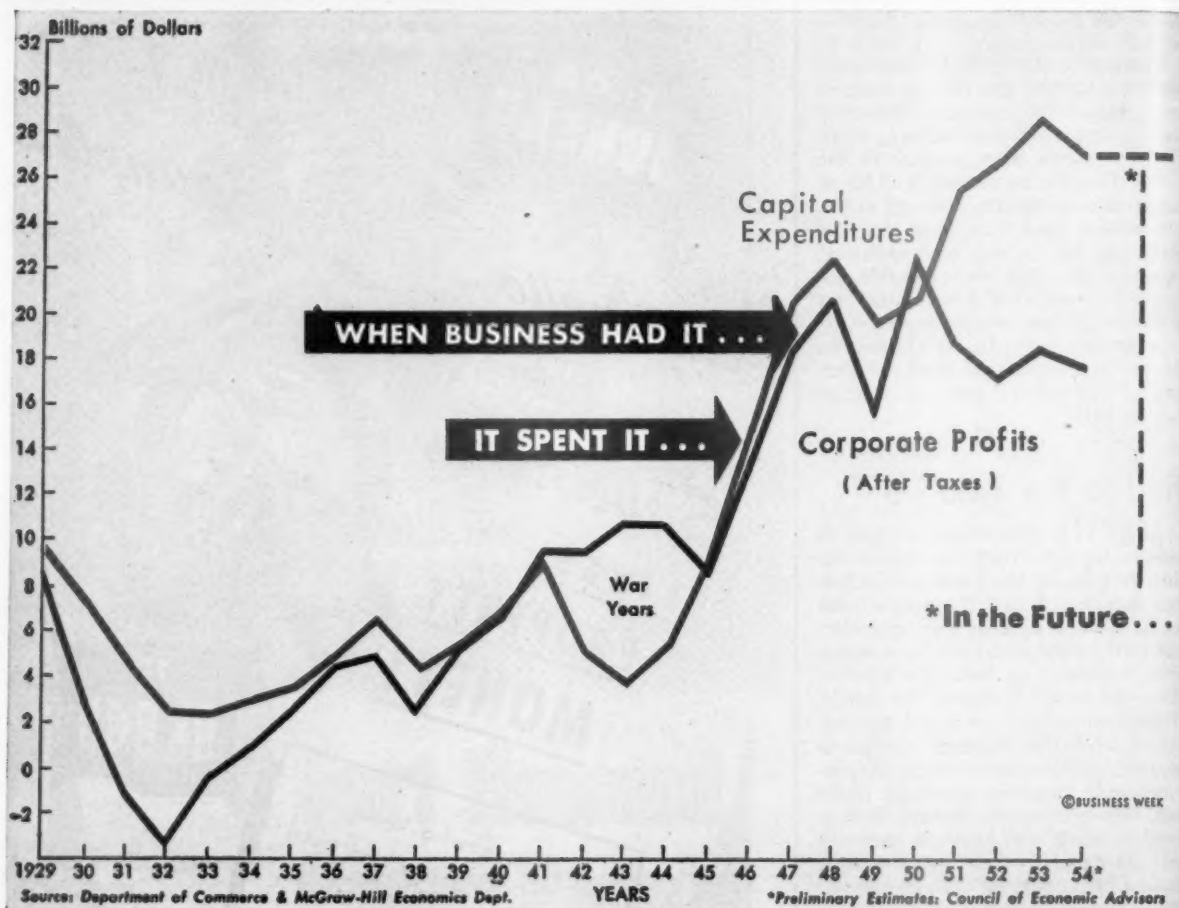
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For men who know the
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customs and climate are no
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MANAGEMENT



Will Lean Years Be the Fat Ones?

The chart above makes one thing clear. Businessmen have normally increased their spending for new plant and equipment only when profits are rising. When profits drop, so does capital investment.

Since the end of World War II, economists think they see signs that this historic pattern can be broken up. They think management may be setting investment policies that will stabilize, rather than accentuate, a business decline.

What happens in the rest of 1954 and in 1955 may very well answer the economists' question: Can businessmen ignore short-run dips in their capital spending plans?

• **It Happened**—Only twice since 1929 have they done so: in World War II and the Korean buildup, both exceptional periods.

In World War II, business profits rose sharply, but private investment

dropped, chiefly because the government itself was building plants.

In the Korean war, the reverse occurred. In the period 1951-52 business for the first time increased its capital expenditures while the money it had left after taxes was dropping sharply.

There was good reason for this. The "police action" in Korea convinced businessmen that we would be living for years in a garrison state economy where large industrial capacity would be needed. In addition, the government prodded their thinking in that direction, and fast amortization for tax purposes made it financially attractive to invest in meeting that long-range need.

Long-range investment decisions could be the key to ironing out the ups and downs for business, but they could be dangerous, too. You find all kinds of opinions on the subject—from outright disagreement with the whole con-

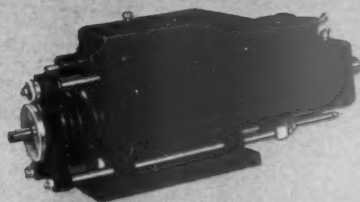
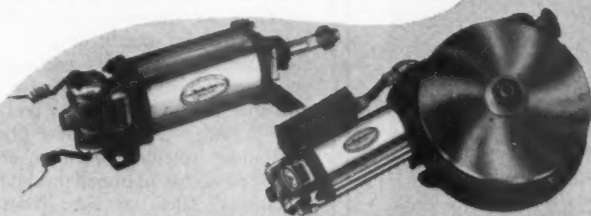
cept, through skepticism, to enthusiastic endorsement.

• **Key Decisions**—For theorists, all this can make interesting discussion material. But for top management, it is a personal problem involving expensive decisions. Right now, for instance, most corporations are collecting statistics from their divisions in preparation of 1955 budgets. Should the planners, if they have any doubt about the economy in 1955, go right ahead with earlier projections of capital expenditures—or should they wait out a possible decline?

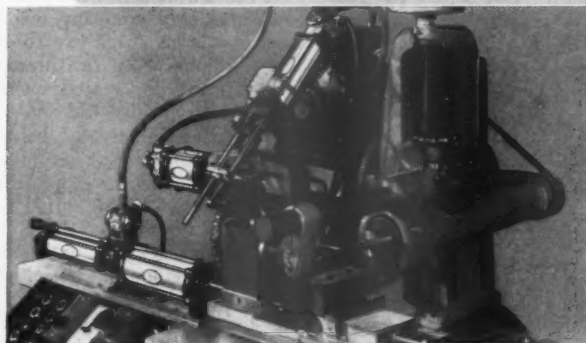
Imagine yourself as head of a farm equipment company. A few years ago you read all the signs—population growth, firm farm price supports, lack of mortgage debt by agriculture—and you laid out a long-range capital spending program, say, for five years.

What do you do today? Farm equipment sales are down, profits are off, and the competition is fierce. The

With one or more of these
"packaged" power units...



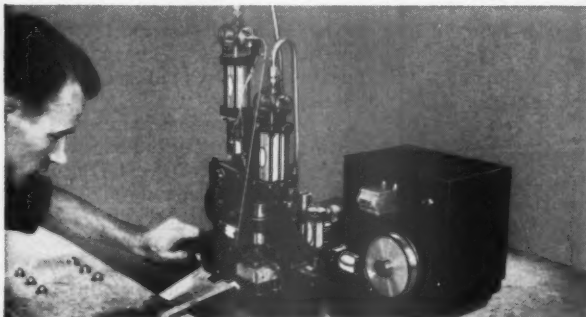
...you can build quickly in your own tool room
special purpose, cost saving machines like these:



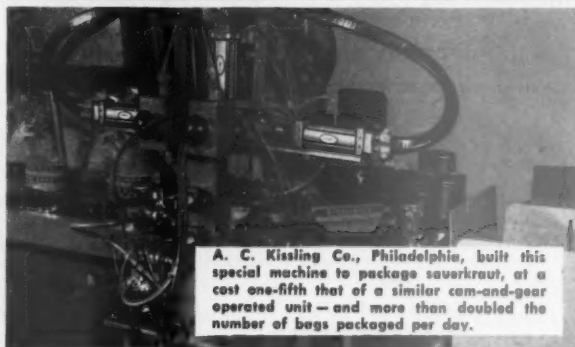
Acetogen Gas Co., Detroit, obtained a 600% production increase in milling splines for their gas cutting torch tips, with this special machine built around Bellows air equipment.



This special testing machine, built around Bellows "Controlled-Air-Power" Devices, increased production from 1,300 parts per day to 3,000 parts per day at the plant of Allis Seal Co., Chicago.



Radio Receptor Co., Inc., Brooklyn, N. Y., designed this tool-room-built cut-off and forming machine and jumped production over the old method by 350%.



A. C. Kissling Co., Philadelphia, built this special machine to package sauerkraut, at a cost one-fifth that of a similar cam-and-gear operated unit — and more than doubled the number of bags packaged per day.

1002A

The next time you get a chance, take a critical look at some of your routine operations — particularly those you've been handling the same way for the past four or five years. There are cost-savings there you shouldn't overlook.

The four illustrations on this page are typical of the ways that Bellows "Controlled-Air-Power" Devices and a little ingenuity can team up to accomplish big savings. It's worth checking into.

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14. RAILROAD SPUR
(a) Car capacity
(b) Minimum tonnage by rail
(c) Inbound
(d) Outbound

15. TERMINALS
(a) Truck
(b) River

16. POWER
(a) Self consumption per month
(b) Minimum KW demand
(c) Potential KW demand
(d) Local water

17. FUEL REQUIRED ANNUALLY
(a) Coal
(b) Natural gas
(c) Oil, kerosene

18. WATER REQUIRED DAILY
(a) Domestic gallons
(b) Industrial gallons

19. USE OF WATER
(a) Steam
(b) Processing
(c) Cooling
(d) Sanitary

20. DOES PLANT WASTE DISPOSAL CONTRIBUTE TO THE PROBLEM?

21. G. G. BARBEE
General Industrial Agent
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PHONE 6-2343

The items that we have checked below are the factors that will influence our choice of a plant site. Please send us more complete information. We understand that the inquiry will be kept completely confidential and such as under no obligation whatsoever.

1. State
2. Firm Name
3. Address
4. City
5. State
6. Nature of Business

7. PROPOSED PLANT WOULD BE:
(a) New Plant
(b) Branch Plant
(c) Assembly
(d) Distribution

8. DISTRIBUTION TO MARKETS
(a) National
(b) Regional
(c) Local

9. EMPLOYMENT
(a) Total
(b) Males
(c) Females

10. PLANT
(a) Floor space
(b) Dimensions of building
(c) Number of floors
(d) Type of construction
(e) Ceiling height

11. PLANT SITE
(a) Average
(b) Sloverage required
(c) City water
(d) Underground water
(e) Surface water

12. USE MAJOR RAW MATERIALS USED AND SOURCE

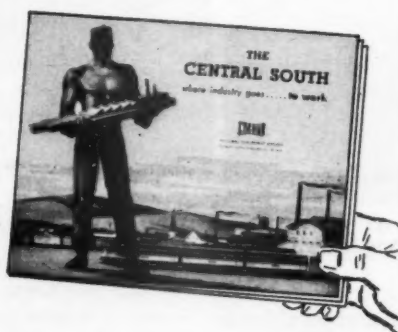
This check list that is a part of the brochure "The Central South, where industry goes...to work" will bring you the answers.

Write for your free copy and see why the Central South can provide all the elements plants need to thrive and grow:

- Rich supplies of raw materials
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decision economists hope you would make is to continue your program of capital outlays regardless of the short-term outlook. (But they'd urge you to do this by modernizing old capacity or bringing out new products—not adding more capacity for tractors.)

On the other hand, if you follow past practices of business generally, you would cut back pretty quickly. As the chart shows, net profits and capital expenditures have almost always chased one another over the peaks and valleys year by year. Compare new plant and equipment spending with other measurements—gross national product, manufacturers' sales, or the Federal Reserve Board index—and much the same pattern emerges.

• **Old System**—Even the most enthusiastic supporters of attempts to regularize business investment will agree that there have always been good business reasons for the old management policy.

The treasurer of a company whose policy now is to plan ahead five to 10 years—and then plow right on through ups and downs with its capital spending program—puts it this way:

"It's going to be tough to go before the board of directors, ask them to approve, say, a \$10-million investment in plant when business is falling off. That policy takes a lot of courage."

So why is management discussing ways and means of doing the very thing that many admit looks impractical?

Two reasons seem most important:

• Businessmen as a whole feel that the long-range economic outlook—beyond the next year or two—is favorable. They have finally gotten over the shock of the Big Depression and the fears and doubts it caused. They feel that an investment today will eventually pan out handsomely.

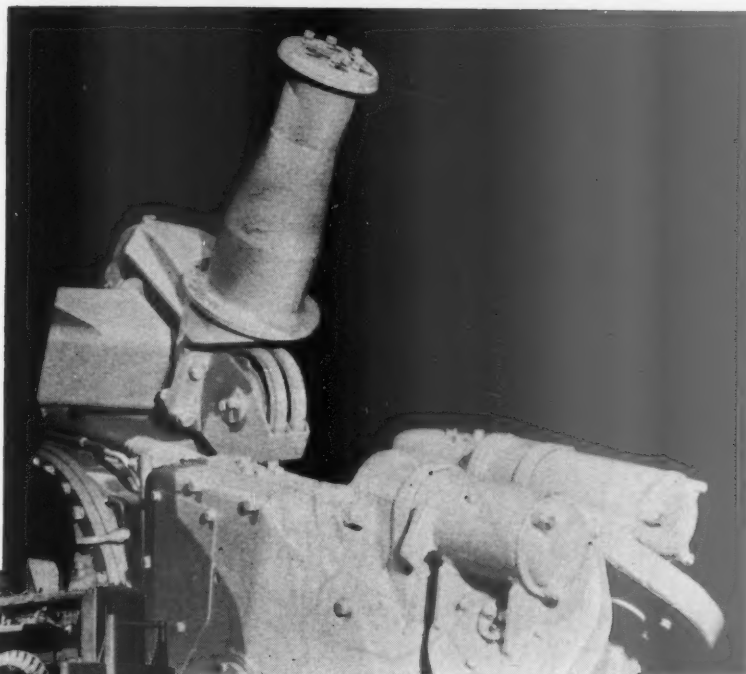
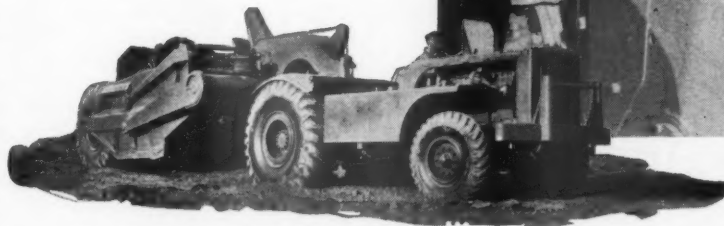
• An increasing number of businessmen, during the prolonged postwar boom, have gotten used to the idea of making firm dollar-and-cents decisions based on five-year projections. That's especially true in big companies.

It may also be true that more and more businessmen are injecting a sense of social responsibility into their business decisions. They have an Administration that they figure isn't hostile, and they know that business will get the blame if there is another major depression. A decision that looks smart from a strictly financial view may seem less bright in the light of its effect on the economy as a whole.

Hence, if there is anything management can do—individually or as a group—to maintain a healthy economy, it wants to hear about it.

• **Counter Cyclical**—For quite a while economists have been asking businessmen why they don't adopt a counter-cyclical capital expenditure program. No one thinks a company acting singly

Right: This "king bolt," made of Republic Alloy Steel, serves as hitch between tractor and trailer. Below: Caterpillar Diesel DW15 Tractor and No. 15 Scraper working on road job in Colorado.



How Republic Alloy Steels Help CATERPILLAR®

Take the "king bolt." It's the link between tractor and scraper or wagon. It takes all the pull, the bumps, and the shocks when a tractor drags earth-moving or other heavy equipment over uneven ground. It has to be tough.

Caterpillar uses a specific Republic Alloy Steel for this part on its DW 15 tractor. And for other parts as well, many of which are not as easy to spot. But all of which are important.

Republic has been supplying Caterpillar with alloy steels for a good portion of the 50 years that track-type machines have been roaming and moving the earth. More than this, Republic metallurgists have helped Caterpillar use these steels to best advantage.

This year is Caterpillar's 50th Anniversary in the manufacture of crawler tractors. And Republic is glad to congratulate a pioneer. You see, Republic pioneered the wide use of alloy steels. And we're still helping manufacturers use these steels profitably.

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General Box

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could do this. But if all businesses agreed to hold back capital outlays when times are good and to go ahead when times are bad, the ups and downs of business would quickly be ironed out.

One top financial vice-president's reply to this idea: "Comic."

Most management people would agree. They simply cannot see themselves delaying capital expansion in a rising market. That would be inviting your competition to steal large chunks of your share of the market.

As for spending when there is a decline, they tell you that the governing factor has to be the availability—not necessarily the cost, though—of money. If profits drop sharply, so will capital spending, since a good share of investment money usually comes out of earnings.

• **Or Noncyclical**—There's another idea, though, that is being advanced by economists and by some top management men. Melvin G. de Chazeau, Cornell University professor and an expert on the steel industry, calls it "non-cyclical" capital investment. By that he means a long-range spending program based on sound projections, but steadily ignoring year-by-year fluctuations.

The closest actual counterpart of this idea can be found in companies like General Motors, Ford, and Westinghouse.

GM last fall made headlines with plans for spending \$1-billion on plant and equipment, even though many forecasters think auto demand will decline in the next couple of years.

Ford, just winding up one huge expansion program, has already announced another.

Gwylm Price, president of Westinghouse Electric Corp., has stated publicly that his company is never again going to be caught short of capacity. Westinghouse has adopted long-range scientific planning as operating policy. It intends to spend money for capital equipment even though at times it means excess capacity for some products at some times.

Other top businessmen say they feel the same way. If what they do matches what they say it will be a significant change in attitude.

• **One or Many**—The question remains whether an individual company can adopt this kind of investment policy—assuming there is money available to carry it out—with any assurance that it won't blow up because other outfits don't go along.

Some doubt that such long-range, steady capital spending programs have had a real test yet. There are others who believe the 1951-52 experience was a test of a sort, that it reflected much more than a simple reaction to the

MICRO SWITCH Precision Switches

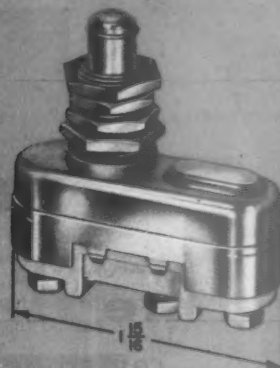
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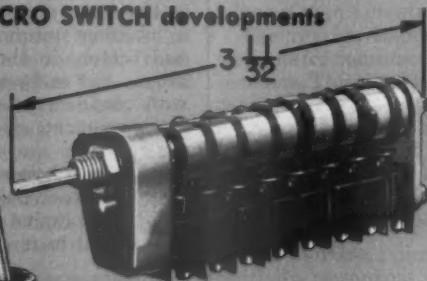
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a high temperature switch
operating perfectly
at 1000° F.

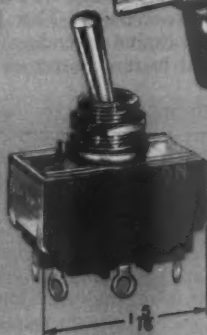


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to meet difficult switch application problems**

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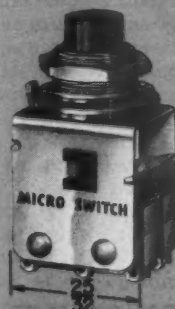


a subminiature rotary
selector switch
controls 2 to 16 circuits



a sealed toggle switch
with external panel seal

a subminiature push-button
switch assembly
for two-circuit control



• Each MICRO SWITCH precision switch is one of many types. One type may be unusually small to fit in cramped space. Another application may require an unusually sensitive switch to be actuated by a feather-light touch. Another switch type may be needed to resist shock and vibration or be explosion- or splash-proof. Long runs with millions of accurate repeat operations may be the prime requisite for another switch type.

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Korean war, excess profits taxes, and rapid amortization. Still, the demand for business investment to meet Korean requirements was out of the ordinary. And profits before taxes actually went up in 1951, dropped less than 10% in 1952. Businessmen knew the lower net was the fault of the excess profits tax, hence were not panicked by the precipitous 22% decline from 1950 in their profits after taxes.

• **Checkreins**—Even so, you can find good business reasons to support the belief that management may act in normal times as it did in 1951-52, at least to a substantial degree.

For one thing, business generally assumes that no matter which party is in power the federal government will act to forestall a major depression. The present Administration, for example, quickly reversed its monetary policies when signs of a sharp decline appeared. A 3% annual increase in the money supply to match our economic growth is practically stated policy today.

Beyond that, technological changes come rapidly these days. It would be conservative management, indeed, that refused to keep up with such changes regardless of the immediate business outlook.

Then, too, management has available a lot more information than it ever had before. In the past, a lot of decisions had to be made by guesswork, with confidence (or lack of it) at any given moment an important part of the guessing.

Research laboratories are common in most industries today. That fact, too, will force capital spending if companies want to stay abreast of competition.

• **Diversification**—Probably as important as any reason for a new approach to capital spending is industrial diversification (BW—Jun. 6 '54, p127). Certainly the idea isn't new to the postwar period, but there has never been so much of it. Top management looks on itself today as heading up a group of profit-making organizations, not just a steel company or can company. It doesn't hesitate to spread into fields it might once have left alone. The result is: a steadier flow of corporate dollars into new projects, even though the basic business has too much capacity.

Take the steel industry. No one imagines that its managers are planning much expansion in basic capacity today. But Republic Steel Corp. has jumped into the consumer market, the industry generally is going into new metals like titanium, and fabricating facilities are being enlarged.

You can find the same thing happening in other industries—oil companies moving into petrochemicals, for example.

As long as there is money available



CORNING GLASS BULLETIN

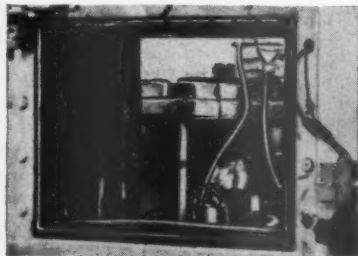
FOR PEOPLE WHO MAKE THINGS

Gamma guardians for protection and perception. Gamma rays are one of the dangers you encounter in taming atomic energy. Those who delve into molecular manifestations often face the double problem of how to see what they're doing while keeping out of reach of lethal radiations. Happily, glass can extricate you from both horns of this dilemma.

Our Harrodsburg plant recently cast and assembled what're undoubtedly the heaviest glass windows in the world, designed for the protection of employees working on an atomic power development program. Some of these windows are $5\frac{1}{2} \times 8$ feet in area and weigh 12 tons.

Glasses for such windows come in three different densities—one has a density of 3.3, which has very high light transmission and doesn't brown when gamma rays hit it; the second a density of 6.2—about the densest glass ever made; almost as dense as steel and six times heavier than water. And the third has a density of 2.7 to match that of concrete.

By using those remarkable remote-control manipulators you've seen pictures of, scientists are able to perform their experiments by looking through these windows without fear of radiation injury.



► Maybe you're not in the market for a 12-ton, gamma-absorbent window, but if you have any kind of problem calling for the selective absorption and/or transmission of rays—cosmic, atomic, X-, ultraviolet, visible, infrared, micro-, radio, what have you, we might be able to help you find a solution. Leastwise, we'd be delighted to hear from you as a starter.

Laboratory ⇄ ?

Some years ago an enterprising designer came into possession of a simple piece of PYREX brand laboratory ware—a standard flask. With a

certain ingenuity and imagination, and the aid of some material to wind around the neck, he transformed this laboratory flask into a beautiful (and salable) coffee carafe.

Since that time, other equally sales-minded designers have designed everything from flower vases to sugar bowls from laboratory glassware. The sales appeal of such items is built in with clean simple lines, heat resistance, functional design and the glistening attractiveness of glass.

Thus, such as humble laboratory flasks travel the oft-unyielding distance from lab to home on the wings of men's creative imagination.

The reverse happened to a bowl we make for manufacturers of kitchen blenders. This time the creative wings carried our product from home kitchen to laboratory. It came about when some fellows in a laboratory hit upon the idea of adapting these kitchen blender bowls to laboratory blending purposes. Simple, huh?

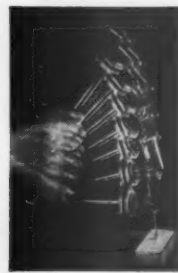
► The starting point for other potentially rewarding ventures could well lie hidden among the more than 40,000 standard items on the Corning product shelves. Could be you're next in line to put the magic of imagination to work projecting one of these into a new area of utility. The first step on this "maybe road" to fame and fortune is simple: Just drop us a note requesting same and we'll let loose a deluge of data on standard items.

How to engineer a platypus. A happy combination of purposeful practicality is the furry platypus with its webbed feet, beaver's tail, and duck's bill.

A lot of our customers, to their continuing delight and profit (we hope), have discovered that glass is sort of platypus-like in that it, too,

can be made to combine many useful characteristics.

Take, for example, PYREX brand pipe. Here you see a man using a piece of it to drive one-inch nails in a pine plank. This is essentially an extra-curricular activity for glass pipe, which is more at home conveying metal-eating acids around chemical plants, but it's a way of showing just how tough glass can be when it's made that way.



All of which may serve to illustrate for you how we can arrange the optical, chemical, thermal, mechanical, and electrical properties of glass

in different combinations to match a considerable variety of end-use requirements. In fact, we've worked up some 50,000 different formulas for glass in our years of helping customers solve specific design and processing problems.

► If platypus-like glass is a novel idea to you, if you've never given glass a second thought as a highly adaptable design and construction material, we suggest your reading a pocket-size volume entitled "Glass and You." It tells in a few words and many pictures how glass contributes to profit and pleasure and we'd be delighted to send you a copy. Or, if you're more concerned with putting glass to work for you than in learning what it's doing for others, there's a slightly more technical bulletin called, "Glass—its increasing importance in product design." We'll be glad to send you either—or both.

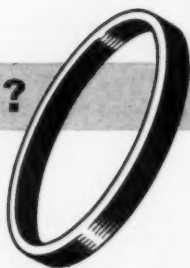
In all fairness to you—and to glass, too, we must admit that this is not the whole story. Fact is, experience indicates that it's customer ideas and problems that really bring out the best in glass. So, even if what's on your mind seems unrelated to any item this page discusses, glass may still be its fulfillment. We'd like to hear from you.

Corning means research in Glass



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RINGS?



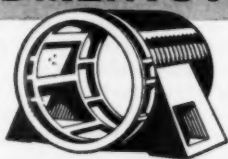
Flash butt-welded rings for aircraft use or wherever a circular metal component is required.

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either from earnings and depreciation or from outside sources, management's attitude today seems to be: "Keep spending it."

• **The Nays**—Naturally, there are dissenters. Joel Dean, Columbia University professor and a capital investment consultant, put it this way at a conference of the National Bureau of Economic Research:

"Will better management of capital expenditures make them more stable cyclically? I don't think so . . . improvements are, in my experience, more likely to accentuate cyclical fluctuations than to smooth them."

Dean's thesis is that if management measures the return on its investments scientifically, it will find that when a

business decline seems certain the proper move would be to curtail capital outlays. You'd be ahead that way because of the savings on costs in acquiring capital equipment and plant.

But some companies, conscious of this possibility, say they have made statistical studies that show the opposite to be true. They've found that the hope of saving by buying at the bottom is washed out by (1) the risk of losing markets if you're caught short without facilities when business swings up, and (2) the actual cost in cash of rushing to build new facilities when demand comes unexpectedly. So to these companies a policy of regular investment—rather than gambling on short-run cycles—makes sense.

Mergers on the Rocks

Most of the latest crop of rumored business combines won't go through. Meanwhile, management has the job of trying to reassure stockholders and customers.

When a rumor spreads that a movie star and husband No. 3 are talking to their lawyers, it sets off a series of secondary rumors on the probable name of No. 4.

The merger situation in business is surprisingly similar. When a company with a history of acquisition starts pawing the ground every ripe corporation in sight is named as a possible mate. The consequences, however, are much more serious than in Hollywood. Instead of a barfly or two getting his name in the gossip columns, violent things happen. Stocks soar—or skid. Customers fret. Personnel feels insecure. Salesmen have to talk faster than usual. And managements catch the brunt of it all.

• **Denials**—Last week, this sort of thing was happening on several fronts. Whereas previous weeks had seen a flock of consummated mergers and absorptions, the pattern last week was one of denial, warning, and mergers on the rocks.

One important denial came from C. L. Huston, Jr., president of Lukens Steel Co. Huston told a group of security analysts in New York that his company was not even considering merger proposals, and found no economic necessity forcing it into a merger.

On another front, Walter P. Paepcke, chairman of Container Corp. of America, admitted that his company had been discussing a merger with Mengel Co., but that the discussions aren't significant. Paepcke said that talks were also going on with several other companies (BW—Aug. 28 '54, p. 49). The Container-Mengel rumor had driven

Mengel stock from 15 to 25 in two weeks.

• **Warnings**—Another top management may have wished it could issue a denial, but had to satisfy itself with a warning to stockholders. J. D. Streett, president of Laclede-Christy Co., St. Louis refractory products maker, complained in a letter to stockholders that the management can't do its job if it is "harried every few months by rumors of purchase, merger, and consolidation."

Streett was referring to the offer made two weeks ago by H. K. Porter, Inc., to buy Laclede-Christy stock for \$20 a share. Streett feels it's worth more, but bid stockholders to decide for themselves. Porter is a Pittsburgh company presided over by 44-year-old T. M. Evans. It has acquired a half-dozen companies in the past two years, is now diversified into rubber, steel, and electrical and hydraulic products. Its sales were \$9-million in 1949, \$64-million last year.

• **Collapse**—Elsewhere, two mergers sank out of sight.

Mack Trucks, Inc., and White Motor Co. stopped seeing each other. White had approached Mack with the idea of acquiring certain of its assets and liabilities, probably for cash under a note (White currently has about \$10-million in cash). Apparently White decided Mack's asking price was too high; and Mack, undoubtedly guided by Northeast Capital, Inc., which holds 29.6% of the stock, wouldn't come down.

E. D. Bransome, president of Mack, beat Robert F. Black, president of White, by 24 hours in announcing the

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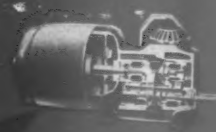
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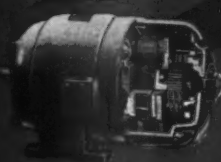
1/8 TO 400 HORSEPOWER



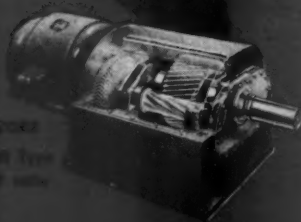
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breakdown of the talks. In one breath Bransome confirmed rumors of merger talks with White and said the talks had come to naught because "no terms could be reached that would be satisfactory for Mack stockholders." Mack says the merger rumors had caused uncertainty among its customers and prospective customers. After the announcement, Mack's stock promptly dropped from \$22.50 to \$18.75 a share.

• **Short Circuit**—Firth Carpet Co., of New York, and Air-Way Electric Appliance Corp., Toledo vacuum cleaner manufacturer, also broke off merger talks. The key block was probably thrown by a third company, Lamb Industries, also of Toledo. Lamb is a holding company that owns several small Michigan companies, some radio and TV stations, and a newspaper. Its president, Edward Lamb, and a New York attorney, Harry Samuels, started buying Air-Way common stock in June, now own or control at least 35%. (Former Attorney General J. Howard McGrath is also an officer of Lamb.)

Lamb and Samuels announced their opposition to the merger, saying the proposed exchange of stock was not right for Air-Way. Last week, Lamb went to Air-Way stockholders for authority to call a special meeting Sept. 10 for the purpose of enlarging the board of directors from 10 to 19.

MANAGEMENT BRIEFS

Braniff Airways, Inc., control remained firmly in the hands of the Braniff Foundation this week after the death of Mrs. Tom Braniff, widow of the founder who was killed last winter in an air crash (BW—Aug. 14'54, p43). Mrs. Braniff left the bulk of her estate to the foundation, of which she was president. She'll be replaced by William A. Blakley, largest stockholder outside the family fund.

Executive changes: Ronald K. Evans, 65, has retired as executive vice-president and a director of General Motors Corp. . . . Donald W. Nyrop, 42, Washington lawyer and one-time government aviation official, was named president of Northwest Airlines, Inc. He replaced Harold R. Harris, who quit last March in a management dispute.

Frederick W. Richmond, 31-year-old New Yorker, has stepped up his drive to acquire machine tool and metal working companies. This week a financial group he heads agreed to buy Hydraulic Press Mfg. Co. Last week it was Birdsboro Steel Foundry & Machine Co.; last month the physical assets of Follansbee Steel Corp. It controls three other metal firms.

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Do they give you complete protection of quality, purity and color? Can they shrug off corrosion or abrasion to assure uninterrupted production? Are they meeting your requirements for high or low temperature service . . . or pressure . . . or cyclical operation? Are they easy to clean and keep clean? If not, you'll want to plan new units. And there, you can only afford the *best* tank and pressure vessel fabrication. By calling in a *qualified* fabricator, you take full advantage of his resources and knowledge. Collaborating with your engineers and consultants *at the start*, he will help translate their ideas into the specialized equipment your processes call for. With your productive efficiency so vital to tomorrow's competition, it will pay you to discuss your equipment needs with your fabricators now.



Or you may wish to contact us for the names of fabricators experienced in your field. As a supplier of quality materials for 144 years, Lukens *knows* equipment builders. Address: Manager, Marketing Service, Lukens Steel Company, 669 Lukens Building, Coatesville, Pa.

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INTERNATIONAL OUTLOOK

BUSINESS WEEK

SEPT. 4, 1954

A BUSINESS WEEK

SERVICE

Collapse of the European Defense Community has produced a serious crisis in the West.

U.S.-French relations are strained as never before. Distrust, even hostility, will grow between France and West Germany. Britain and the U.S. don't see eye to eye on what to do next.

It will take great diplomatic skill, and more patience than either Paris or Washington now show, to find an alternative for EDC.

Still, this is not the kind of crisis that's likely to increase the danger of war (page 27).

On the contrary, it's part of a new phase in the East-West struggle—one where shooting will be out but there'll be intensive political and economic jockeying. The Communists will be playing up the neutralization of Germany and Red China's right to Formosa—issues that can easily divide the West.

The danger is that the West will fall apart in this kind of contest. At best, we'll fight it with a far looser alliance than we've had during the past four years. And from now on Washington will have to share the leadership with London.

—•—

Washington is disgusted with Mendes-France's performance on EDC.

Secretary of State John Foster Dulles made no bones about that in the statement he made this week.

Dulles will insist now that West Germany get its sovereignty immediately, then be admitted to NATO as a full member. German rearmament would follow soon.

The State Dept. fears that Chancellor Adenauer may be repudiated unless something is done for him in a hurry.

But the U.S. will find it hard to sell this plan to either Paris or London.

Both are ready to give Bonn its sovereignty. But the French Parliament doesn't want the Germans in NATO as equal partners any more than it wanted EDC.

Even the British want some limit put on German arms production and on the size of a national German army.

Mendes-France apparently hopes to get around the problem by:

- Getting the NATO Council's authority increased so that it can exercise more control over the military forces of member states.
- Persuading Churchill to sponsor a special group within NATO that would include the six EDC nations plus Britain. (This might be no more than a revamping of the pre-NATO Brussels pact between Britain, France, and Benelux so that West Germany could be taken in.)

Looked at one way, the whole problem boils down to whether or not the U.S. and Britain must make a choice between Adenauer and Mendes-France.

Washington seems to have decided in the affirmative already, and

INTERNATIONAL OUTLOOK (Continued)

BUSINESS WEEK

SEPT. 4, 1954

plumped for Adenauer. But London will do everything possible to avoid making such a choice.

There is no doubt that the French and German leaders are both in political hot water.

Mendes-France must rally all the supporters of NATO in the French parliament, whether they have been pro-EDC or anti-EDC up to now. But the way he handled the EDC debate has antagonized the Popular Republican and Socialist leaders whose support he needs.

Adenauer is under strong pressure from his own coalition and the opposition Social Democrats to ask for more than the sovereignty that EDC was supposed to give West Germany. He must insist, too, on equality in NATO. If he agrees to anything less, his already shaky position could become untenable.

Moscow can watch all this with grim satisfaction.

But Foreign Minister Molotov won't watch from the sidelines for long. He's sure to move in to exploit this situation.

Another Soviet call for a new Big Four meeting on Germany is almost certain. And the West can hardly refuse. Even Adenauer has no choice but to go along.

This will give Molotov a chance to make one more bid for a unified but neutral Germany. And his cards look stronger than they ever have before.

A Southeast Asia defense pact can be expected from the conference that opens in Manila next week.

But SATO won't be the kind of military setup Washington was talking of at the time of Geneva.

For one thing, Britain is going along largely to please the U.S., not because London thinks SATO will be an effective offset to Communist power in the area.

Then, the pact will provide cover for only a small part of Southeast Asia—the Philippines, Thailand, and Laos and Cambodia.

There should be some payoff from the economic side of SATO, which the U.S. is stressing now more than it did originally. In time, this may draw Burma into the fold.

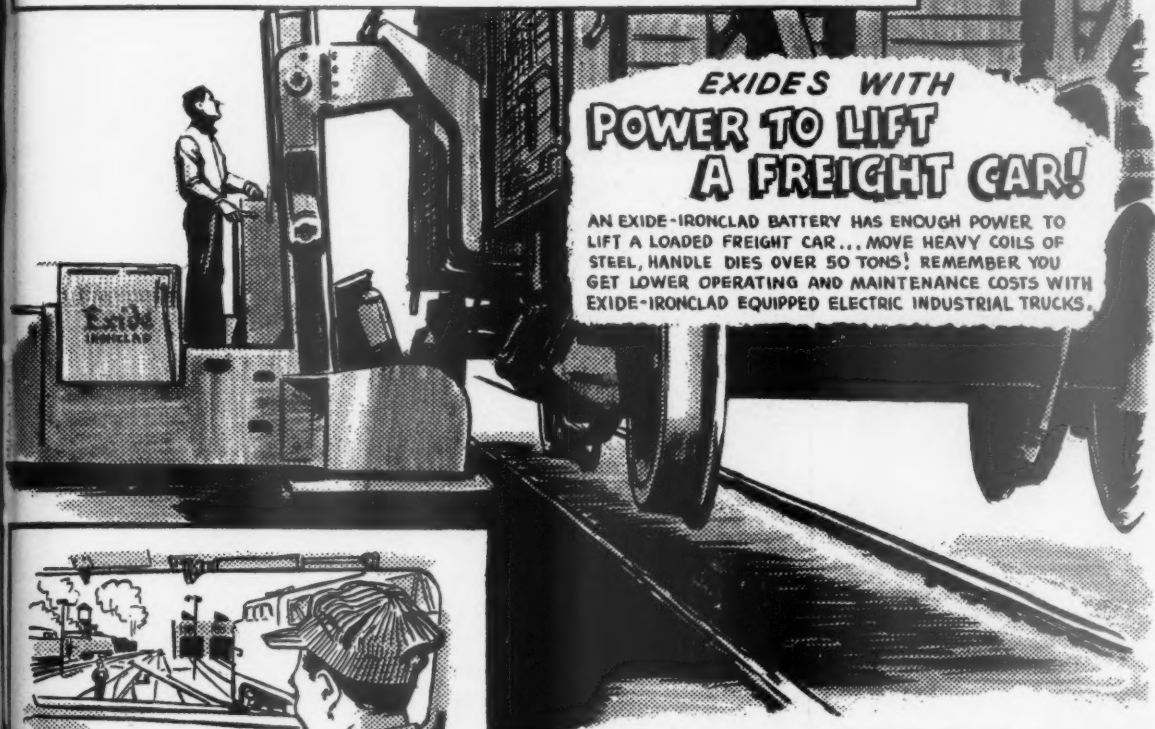
The U.S. might gain additional ground in the area if the Eisenhower Administration should buy a program that C. D. Jackson, part-time White House consultant, has been pushing.

Jackson wants the U.S. to sponsor a worldwide economic aid plan through the U.N. Member nations would contribute such items as surplus food, metals, and even finished industrial products. These would be ladled out to "have-not" countries, mainly in Asia.

But so far the State Dept. and the Foreign Operations Administration are solidly against Jackson. They complain that his scheme would duplicate existing U.S. aid programs and, to a lesser extent, the present U.N. technical aid setup.

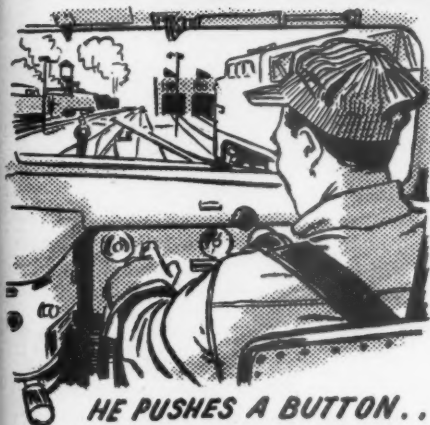
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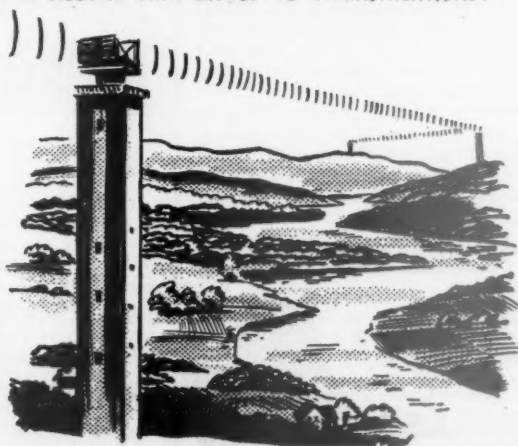
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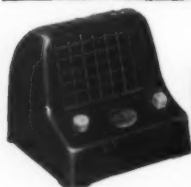
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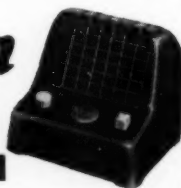
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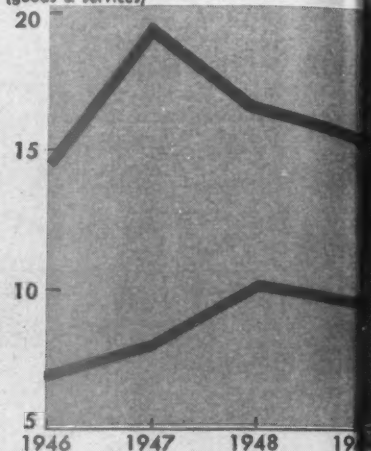


BUSINESS ABROAD

European Currencies Are Getting

... Gap between
U.S. exports and
imports closes

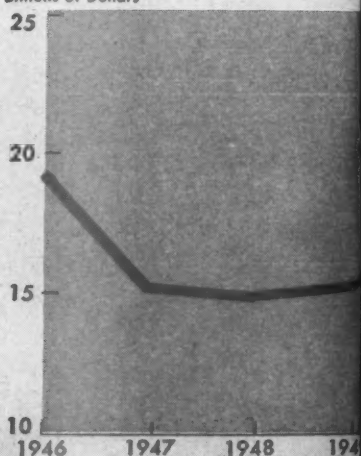
Billions of Dollars
(goods & services)*



Data: Dept. of Commerce.

... And foreign
countries build up
their gold reserves
and dollar holdings

Billions of Dollars*



Data: Federal Reserve Bulletin.

But...

Convertibility Still

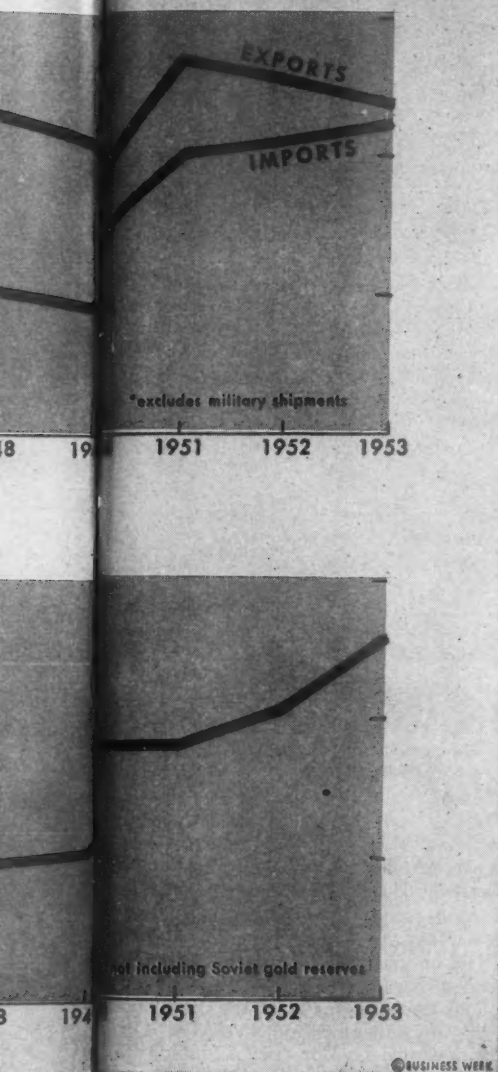
Early this summer, as the British pound gained strength, world money markets were full of talk about convertibility of currency. Some dopesters, perhaps encouraged by London, said that by fall or early winter the pound—followed by the West German mark, the Dutch guilder, the Belgian franc, and perhaps even the French franc—would be convertible into dollars.

Now it looks as if London, largely for domestic political reasons, will water down sterling convertibility to the point where it won't mean much. There are even signs that Chancellor R. A. Butler may delay it indefinitely. This would let the U.S. down, as France has done this week in scuttling the European Defense Community (page 27).

• Economic Need—Convertibility—the

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right to exchange francs or pounds freely and legally for dollars, and vice versa—has been one of the chief post-war goals of U.S. foreign economic policy.

Today some currencies, including the pound and the mark, are freer from exchange controls than they were a year or two ago. This is partly due to the policies of Chancellor Butler in

Britain and Economics Minister Ludwig Erhard in West Germany and partly due to the way the U.S. has sustained Western Europe's supply of dollars through high imports and military spending abroad.

Even so, the pound and the mark are hardly more convertible than the "hardtop convertibles" that the U.S. auto industry produces.

• **Need for Nerve**—As money experts see the situation today, about all that's needed to start turning the "hardtop" into a real convertible is a little political courage in London. The International Monetary Fund is expected to go into operation this fall as a stabilization device. This, say the experts, should round out the basic economic and financial conditions that are needed for the first big step toward convertibility—convertibility for current trade. They point to these facts:

• The dollar gap—the difference between what the U.S. buys and what it sells—has pretty well disappeared (chart, top left). The gap had to be closed first by loans and foreign sales of gold to U.S., then by our foreign aid program. Today, however, the U.S. buys about as much in goods and services from the rest of the world as it sells.

• Foreign gold reserves and dollar holdings (government and private balances in U.S. banks) have gone up by 50% since 1948 (chart, lower left). In the past two years the outside world, especially Britain and Western Europe, has been able to salt away most of the receipts from U.S. military spending abroad.

I. Two Contrasting Eras

You get a good idea of what's happened by comparing two four-year periods—1946-49 and 1950-53.

• During the first period, the United States exported nearly twice as much as it imported (\$67-billion against \$35-billion). The difference was nearly covered by \$23.4-billion in U.S. loans and grants, plus the liquidation of \$7.1-billion in foreign gold and dollar assets.

• During the second period, the U.S. exported only \$8.5-billion more than it imported. This was more than offset by grants and loans of \$13.2-billion. With this help, foreign countries were able to add \$7.8-billion to their gold and dollar assets.

• **Back in Competition**—Such a drastic readjustment, most marked in the past two years, would not have been possible without a sharp increase in production in Western Europe and without



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...clues

tight control of inflation. These developments brought price levels in non-dollar areas closer into line with those in dollar areas than they had been since the war. Today, many European goods are competitive with U.S. goods both as to price and delivery dates.

In most world markets, U.S. exporters are finding this to be the case. There's proof, too, in the experience of the big U.S. oil companies that operate in the sterling area. Two or three years ago, when sterling was in bad shape, these companies were willing to play along with London in order to maintain their foreign business. They told their purchasing departments to buy all possible equipment and supplies for nondollar currencies, even if it meant paying 20% more than in the U.S. Today, they no longer have to pay a premium to get what they want outside the U.S.

• **Caught Up With Demand**—Statisticians in Washington have studied price levels and come up with a conclusion that points in the same direction: In the non-Communist world, the repressed demand for U.S. goods has been largely satisfied in the last two or three years.

In fact, the experts say, if all currency and trade barriers limiting choice between American and non-American products were removed, the demand for U.S. goods would rise only \$1-billion a year. Three years ago, you could have multiplied that figure by at least five.

II. International Fund

As for the role of the International Monetary Fund, there's no doubt that this institution is prepared to throw its resources behind any genuine moves toward convertibility. According to present plans, the IMF directors who meet in Washington late this month will agree to back the pound sterling against temporary pressure to the full amount of the British quota—about \$1.3-billion. On top of that, London might have access to another \$900-million, the total quotas of the other sterling area members of the IMF. This would give London, say, \$2-billion on top of its present gold reserves of \$3-billion.

There was talk earlier this year of additional standby reserves of \$1-billion to be put up by the Federal Reserve System. But this plan seems to be up in the air at present, perhaps because London is no longer eager to go all-out for convertibility.

• **Earlier Terms**—The British could claim, of course, that their original conditions have not been met as yet. Two years ago, Butler was talking convertibility on these terms: (1) a special U.S. stabilization fund of at least \$3-billion, (2) substantial cuts in the

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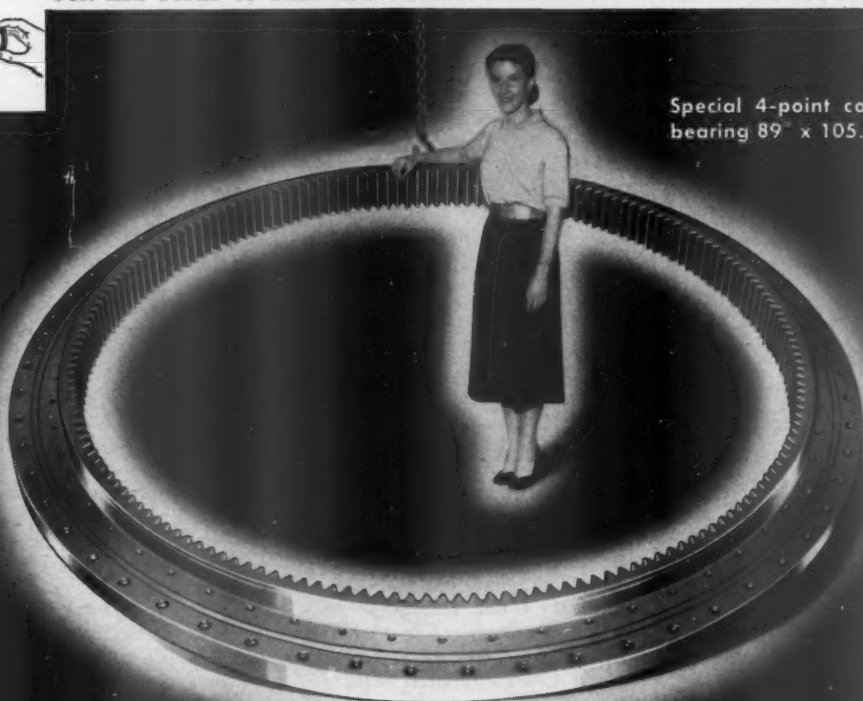
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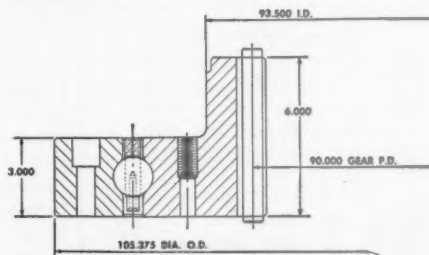
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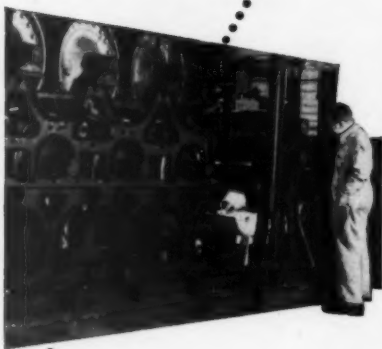
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U.S. tariffs to let European exports earn more dollars, and (3) international agreement to stabilize raw material prices.

Meanwhile, U.S. imports have stayed at a high level, even through the recession, without new tariff cuts or commodity agreements.

• **Decision**—The fact is that late last spring Chancellor Butler and The Bank of England had about decided to push ahead with convertibility, even though the U.S. Congress had just postponed action on the trade liberalization proposals of the Randall Commission (BW—Jan. 30 '54, p118). Butler's idea of convertibility fell far short of what the U.S. had been hoping for. But apparently he planned a fairly bold "collective approach" that is a joint movement toward convertibility by the major European currencies.

For its part, Britain would (1) reduce trade quotas that now discriminate against American goods and (2) introduce nonresident convertibility on current account—that is make convertible into dollars the pounds earned by countries in Western Europe and other parts of the world that are in neither the sterling area nor the dollar account area. (The pound is already convertible for all trade that goes on between the sterling area and dollar account countries, including the U.S., Canada, and several Latin American states.) At a later date would come convertibility for residents of Britain and the rest of the sterling area and, possibly, some easing of controls over movements of capital.

• **Backing Away**—Early in the summer, however, Butler seems to have gotten cold feet. Some U.S. officials lay it to a sudden realization by the British that they couldn't make nonresident convertibility stick with the rest of the sterling area. Once they started giving dollars to Belgians and Brazilians, it would be almost impossible to refuse them to Indians and Australians.

More important was a new Conservative assessment of the domestic political outlook. The Churchill government fully expects an election—and a close one—sometime next year. Conservatives fear what the Labor opposition might do if the government tried convertibility and it flopped. Laborites, from left-wing Aneurin Bevan to right-wing Hugh Gaitskell, are opposing convertibility on the ground that it ties Britain too closely to the unstable U.S. economy.

III. Step by Step

In the series of monetary and trade conferences that lie ahead, it looks as if Butler will move with caution.

Immediately after the IMF meeting there is to be a session of Commonwealth finance ministers in London.

After that some meetings of the Organization for European Economic Cooperation and GATT (General Agreement on Trade and Tariffs).

• **Easing Slowly**—If all goes well at these four meetings, Britain and the sterling area countries, plus some European nations, may start whittling away at the quotas that now put U.S. exporters at a disadvantage in their markets.

If more freedom in buying U.S. goods doesn't throw any great strain on dollar reserves, Butler may then be ready for nonresident convertibility. That's assuming no British election has been called or looks likely.

• **No Sensational Gain**—Even if it comes next winter or spring, nonresident convertibility in Britain and tie-in moves by other countries won't do very much to change present patterns of trade or to help U.S. exports.

There would be some over-all gain, of course, if the countries involved should decide to operate with existing gold reserves and dollar holdings instead of accumulating reserves as they have over the past two years. Then trade might return to something more like prewar channels. For example, there would probably be a bigger market in Western Europe for low-price U.S. food grains.

In the case of Britain, there might be a bigger market for some types of U.S. manufactured goods. But U.S. oil and film industries would be held to their present commitments. As for tobacco, British cigarette makers would be allowed to buy U.S. tobacco freely, but only after assuring the government that not more than 75% of the tobacco in any cigarette sold in Britain would be tobacco from dollar areas.

BUSINESS ABROAD BRIEFS

F. W. Woolworth Co. plans to open its first variety goods store in Mexico next year. It'll plunk down an initial \$1.5-million for several stores in Mexico City, and it hopes to expand eventually to a chain of 15 or 20 stores.

Under the easing of controls on U.S. exports to the Soviet bloc (BW—Aug. 28 '54, p36), the number of items on the banned list of strategic goods is being pared down from 297 to 217. Items now exportable to Iron Curtain areas include railroad equipment, agricultural implements, and crude oil.

East Germany is gunning, too, for South Asian business (page 126). A Red trade mission is on the way to India to open trade talks. The East Germans now have no trade relations with the Indians.

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THE ARMY has quelled the riots that followed Pres. Vargas' suicide, and, there's . . .

Uneasy Calm in Brazil

Cafe, new president, takes over a sea of economic problems, in a situation that is probably too chaotic to permit him to attempt drastic reforms.

The Brazilian army, by a show of force, has managed to restore Brazil this week to an uneasy calm—in the wake of the riots and turmoil that followed the suicide of Pres. Getulio Vargas. The country is waiting to see how the new Pres. Joao Cafe (BW-Aug. 28'54, p100) handles the reins of state after Vargas' forceful methods.

Few observers expect Cafe to make immediate big changes. Brazil's economy is badly in need of reform; it's saddled with inflation and a shortage of foreign exchange. But developing political troubles are likely to prevent any quick moves toward a freer economy. And the Communists are sure to take advantage of any deterioration.

• **Dissolving**—The coalition of the Labor Party (which Vargas headed until his death) and the Social Progress Party (Cafe's own organization) is falling apart. This coalition helped bring Vargas to power in 1950. Now Cafe is struggling to hold it together but so far he has managed to induce only one Labor Party member—Labor Minister Napoleao Guimaraes—to join his cabinet.

What's more, Vargas' death has caused a dangerous schism in the ranks of the Labor Party itself. It is now split between a strong wing led by the former Labor Minister, Joao Goulart, and one headed by Guimaraes. Goulart

is basing his appeal on Vargas' suicide message, which called for a struggle against foreign imperialism. Guimaraes is a moderate who opposed Vargas' scheme to nationalize Brazil's oil resources and industry (BW-Sep. 26'53, p168).

This division in the Labor Party—Brazil's biggest—creates a potential situation that's tailor-made for the Communists. Many Brazilians believe that there was little chance for Communist success as long as Vargas was alive, because of his great popular support. Now, if the workers feel that they have lost their voice, they may turn to the Communists. (Despite a legal ban, the Brazilian Communist party is the largest in the Western Hemisphere.) Such a switch by the workers is not considered an immediate possibility, though, unless Cafe's government swings too far to the right.

• **The Brake**—But this restriction on Cafe's freedom of action is the biggest deterrent to any quick reforms of Brazil's ailing economy. The new president will have to go slow in combatting nationalism and freeing Brazilian business from the many controls with which Vargas saddled it. And foreign capital isn't likely to get much better treatment than it does now.

With little room to maneuver, Cafe's chance of improving Brazil's economic

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Caster lubricant sealed in

Bassick "3D99" sealed casters virtually eliminate lubrication problems while protecting swivel and wheel bearings from dirt and water. Lubricants cannot get out. This protects rubber wheel treads and eliminates hazards due to greasy floors.

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Materials-handling accounts for 30% of total manufacturing costs. Whittle away at that 30% with a fast,

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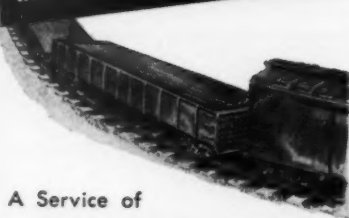
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FENCE

situation before the presidential elections next year are small. That's probably the outlook despite any remedies Eugenio Gudin—Cafe's new finance minister—might come up with. And Gudin is unlikely to do much until this fall's congressional elections are out of the way. Even now he's not making any rash promises. He does indicate some things he might do, though, if he gets the chance. He's against laying out money on new public works, though he won't be able to stop those already launched. And he proposes to trim government expenses. The biggest item of expense, however, is salaries and here he must tread lightly lest Cafe lose whatever cooperation he is getting from the various parties.

• **Production**—Though Gudin—one of Brazil's leading economists—has always believed in an austerity policy he won't be able to do much more than Oswaldo Aranha—his predecessor—attempted (BW—Oct. 10 '53, p156).

That he will go easy is indicated by his statement that monetary and banking policy will be oriented against inflation but not to a point where production would be affected unfavorably.

If Cafe and Gudin can work the unlikely miracle and settle Brazil's current economic troubles, it could mean that the same team would carry on after the 1955 elections.

A lot can happen in the meanwhile. Vargas' death means an all-out scramble for the 1956 presidency. Demagoguery will be rampant with many barbs thrown at foreign imperialism. The U.S. will be a particular target because of sudden Yankee unpopularity that flared up over a U.S. campaign against coffee prices.

Even moderates like Aranha say that Brazilian prices have not been excessive and that the U.S. campaign has seriously hurt Brazil. Such damage, they maintain, can aid only the Communists.

Steel Mill for Pakistan, Too

A pilot plant is recommended by Krupp to develop local ore. Krupp may build the plant, too. West Germans are expanding their business in South Asia.

West German business is on the move again in South Asia. Last year the Germans snared a contract to put up a \$150-million steel mill in India (BW—Aug. 22 '53, p104). Now they're likely to get first crack at doing a similar job in neighboring Pakistan.

Friedrich Krupp & Co. was retained by Pakistan as consultant. A 14-man team was sent to investigate Pakistan's ore deposits. This investigation has now been completed, and Krupp is now ready to propose the building of a small pilot plant to produce about 50,000 tons of steel yearly.

The financing details of the proposed project aren't yet known, but German industrial circles believe Krupp will take between 5% and 10% of the shares in the new Pakistan steel industry in lieu of outright payment if it puts up the mill. Though Krupp says the contract to build the new steel mill will be open to competitive bidding, it is thought likely that Krupp itself will get the order.

• **Chemical Business**—West German chemical and pharmaceutical houses are also smelling out possible Pakistan business. Pakistanis have already asked Farbenfabrik Bayer, Leverkusen, to look into the possibility of setting up a chemical-pharmaceutical industry in their country.

The first look was discouraging. The German team from Bayer reported that there isn't a sufficient water supply in

easily accessible areas, such as those around Karachi. However, Bayer left the way open for a deal later if Pakistan's irrigation projects pan out.

Meanwhile, the Pakistanis are impressed with the enthusiasm of West Germans to lend a helping hand. This week an official of the Pakistan Industrial Development Board toured Germany to sign up qualified German technicians to work on a contract basis in Pakistan. Scores of Pakistani engineers and apprentices are already working and studying in German plants. Others are expected later.

The Pictures—Ackroyd Photography Corp.—142; Bell Telephone Laboratory—154 (rt.); Capitol Records, Inc.—33 (top); Chrysler Corp.—43; Henry G. Compton—30, 31, 32, 130, 154 (lt.); Ford Motor Corp.—88; General Electric Co.—152; Illinois Institute of Technology—153; International News Photos—Cover (lt.), 27, 125; Bob Isar—50 (lt.); Kearney & Trecker Corp.—96; Herb Kratovil—50 (rt.), 56, 57; Rudolph E. Leppert, Jr.—Cover (rt.); Ed Nano—34; Seagram Distillers Corp.—132; Republic Steel Corp.—76; Standard Oil Co. (N.J.)—90; United Press—Cover (ctr.); U.S. Steel Corp.—29; Wide World—33 (bot.).

Question: Which of these Zenith owners is testing a powerful weapon?



A new kind of sound detector? In a way, yes. This new Zenith High Fidelity phonograph faithfully transmits sounds within the limits of the 50 to 15,000 cycle range, vastly increasing your enjoyment of recorded music.



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Shortwave that pierces the Iron Curtain? The famous Zenith TRANS-OCEANIC Portable brings in many foreign countries, including Russia.



Advanced Radar? Not unless you could call TV a kind of radar. Zenith's contributions to radionics have helped advance the art of television to today's high standards.

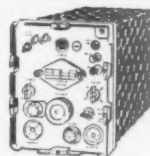
Answer: All of them are.

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Manager of Large Electric Motor Shop Praises KLIXON Protectors

PHILADELPHIA, PA.: Mr. Joe Previty, well known for his activities in NISA and Manager of Penn Electric Motor Company, largest Philadelphia motor rebuilder and distributor of electric motors and supplies, has this to say about KLIXON Protectors:

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THE MARKETS

Market Faces a Deluge of New-Issue Offerings: A SAMPLING

Amount (Mill.)	Issue	Purpose of Issue
\$250.0	American Tel. & Tel. 30-year deb.	New money
75.0	New York Tel. 35-year bonds	New money
60.0	Illinois Central R. R. 35-year bonds	To refund 3 ⁷ / ₈ s
55.0	Southern Bell Tel. & Tel. 35-year deb.	Refunding, new money
52.0	Northern Pacific Ry. 30-year bonds	To refund 4 ¹ / ₂ , 5s
50.0	Consolidated Edison (N. Y.) 30-year bonds	Refunding
30.4	Louisville & Nashville R. R. 49-year bonds	Refunding, new money
25.0	Gulf, Mobile & Ohio R. R. bonds	—
24.0	Gulf States Utilities 30-year bonds	Refunding, new money
20.0	Texas Power & Light Co. 30-year bonds	Refunding, new money
20.0	Northern States Power bonds	—
20.0	Public Service of Colorado 30-year bonds	New money
20.0	Tennessee Gas Transmission debentures	New money
20.0	Laclede Gas Co. bonds	—
18.0	Wisconsin Power & Light bonds	Refunding, new money
17.0	Louisiana Power & Light 30-year bonds	Refunding, new money
16.5	Indiana & Michigan Electric 30-year bonds	New money
16.0	Western Maryland Ry. 25-year bonds	Refunding, new money
15.0	Dayton Power & Light 30-year bonds	New money
15.0	Kentucky Utilities bonds	—
12.5	Wisconsin Public Service bonds	Refunding, new money
12.0	Montana-Dakota Utilities 25-year bonds	New money
10.0	Columbus & So. Ohio Electric 30-year bonds	New money

Borrowing Costs Start Up

Wall Street is coming to believe that corporate borrowing costs this fall will be higher than was originally expected. Rates are already starting to edge upwards on the new issues market.

Opinion is divided—and mostly guesswork—on how high and how long the rise will be. But Streeters seem to be pretty well agreed that for some months new long-term bond flotations, even of the highest quality, will probably offer buyers a yield of approximately 3% or better.

This belief got some solid confirmation this week. Southern Bell Telephone & Telegraph's \$55-million of 35-year, 3¹/₈% debentures were offered to the public at a price yielding 3.01%. Both the coupon rate and rate of yield are well above the summer average for such high grade obligations. Indeed, two equally blue-chip issues, bearing 3% coupons, were launched in July on a 2.94% yield basis, while in mid-August another similar 3% flotation offered a 2.97% yield.

• **Technical**—Basically, the squeeze on borrowers does not seem due to anything so serious as a basic change in the money rate picture. The real cause of the rise appears to be a technical factor: the building up in the past few

weeks of an extraordinarily large backlog of contemplated new financing.

Within the next few months, about \$1¹/₂-billion of new corporate bonds—including the \$700-million in the compilation above—seem definitely slated to reach the offering stage.

Handling any such freshet of offerings will take a lot of underwriting capital, even if none of the issues turn out to be real "selling" jobs. Mother Bell's coming \$350-million issue stresses this point. Each bid must be accompanied by a good faith deposit, a certified check covering 5% of the issue. This means that the winning syndicate will have \$12.5-million of its own money tied up for the week or 10 days between the bid deadline and the actual delivery of the bonds.

• **Housecleaning**—These capital requirements, added to the specter of rising money rates, moved a number of syndicates last week to improve their liquidity by sweeping from their shelves the unsold remnants of earlier "sour" issues. These leftovers included sometimes hefty blocks of Boston Edison, Consolidated Natural Gas, Mountain States Telephone & Telegraph, and Southern California Edison bonds, all of which had been offered at premium

prices to yield less than their 3% coupon rate.

When the remnants landed on the over-the-counter market they drew prices that undoubtedly bit huge chunks out of any earlier underwriting profits that the deals might have yielded.

In every case, the leftovers promptly moved to prices that yielded better

than 3%, more than a point below the original offering level.

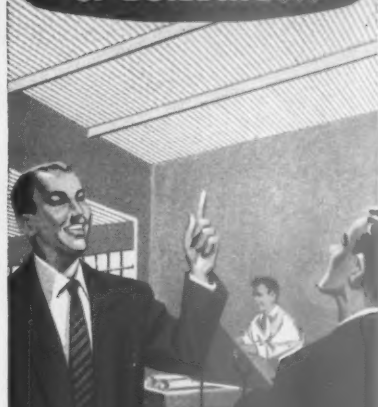
The Southern California Edison deal went particularly sour. When price restrictions were removed, the bonds still didn't really begin to move until their over-the-counter price had fallen to 99½% of par. That is about \$9 per \$1,000 bond less than the actual cost of the underwriters.

The Bull Market—Has the Crest Been Reached?

Stock Group (Indexes: 1935-39 = 100)	1953 High	Start of Rally*	Subsequent High	Recent Level	Rally Gains Maximum	Now
Aircraft Manufacturing	229.7	194.2	451.5	435.0	132.5%	124.0%
Machine tools	224.6	184.8	336.9	335.3	82.3	81.4
Electrical equipment	186.2	171.2	333.1	308.5	94.6	80.2
Paper	646.0	584.9	1015.6	982.8	73.6	68.0
Finance companies	166.4	138.4	227.2	227.2	64.2	64.2
Motion pictures	163.5	139.5	225.1	224.0	61.4	60.6
Auto trucks	127.3	104.7	173.7	167.5	65.9	60.0
Tires and rubber goods	540.6	420.4	681.4	663.5	62.1	57.8
Printing and publishing	130.4	104.1	163.0	163.0	56.6	56.6
Office, business equipment	272.7	240.9	383.1	371.8	59.0	54.3
Shipbuilding	286.1	227.6	367.8	349.1	61.6	53.4
Building materials	172.7	151.2	237.0	230.5	56.7	52.4
Steel	215.5	174.8	269.0	258.2	53.9	47.7
Metal fabricating	193.5	165.5	254.5	243.5	53.8	47.1
Vegetable oil	243.9	163.6	239.1	234.8	46.1	43.5
Fertilizers	478.3	384.3	540.6	540.6	40.6	40.6
Automobiles	263.1	202.4	285.9	283.7	41.3	40.2
Copper	192.1	137.2	195.5	189.5	42.5	38.1
Machinery	185.3	154.3	221.0	212.8	43.2	37.9
Drugs—proprietary, cosmetics	146.1	141.8	199.7	195.2	40.8	37.7
Metal containers	115.7	107.2	149.8	146.8	39.7	36.9
Oil-integrated companies	300.2	261.8	363.1	355.0	38.7	35.6
Auto parts and accessories	181.0	143.0	197.0	192.6	37.8	34.7
Chemicals	263.1	240.8	329.5	320.9	36.8	33.3
Mining and smelting	137.7	105.9	140.6	140.6	32.8	32.8
TV, electronics	330.7	260.5	362.5	343.6	39.2	31.9
Gold mining (U.S.)	65.7	55.3	72.9	72.9	31.8	31.8
Air Transport	361.3	275.9	375.5	360.2	36.1	30.6
Railroad equipment	110.3	92.0	121.2	117.5	31.7	27.7
Food chains	291.6	280.8	371.5	357.8	32.3	27.4
Glass containers	131.8	117.0	151.3	148.5	29.3	26.9
Natural gas	245.7	218.4	277.2	276.2	26.9	26.5
Utilities—operating companies	140.0	131.6	167.4	166.0	27.2	26.1
Utilities—holding companies	233.2	211.9	270.1	266.8	27.5	25.9
Mail order, general chains	258.8	239.7	301.0	301.0	25.6	25.6
Oil—crude producers	716.1	590.6	792.1	739.2	34.1	25.2
Agricultural machinery	162.3	124.6	155.2	155.2	24.6	24.6
Food companies	165.5	157.0	201.9	195.6	28.6	24.6
Department stores	267.4	251.5	313.6	305.9	24.7	21.6
Distillers	401.9	356.6	432.6	432.6	21.3	21.3
Railroads	185.5	153.7	189.0	182.8	23.0	18.9
Confectionery	128.2	122.5	148.0	143.5	20.8	17.1
Bituminous coal	494.0	354.7	429.6	405.8	21.1	14.4
Shipping	602.7	490.0	560.3	558.0	14.3	13.9
Textile weavers	267.6	214.5	258.6	243.7	20.6	13.6
Soft drinks	116.0	100.0	118.4	112.3	18.4	12.3
Shoes	126.3	120.5	138.5	133.8	14.9	11.0
Sugar	105.3	84.6	93.9	93.7	11.0	10.8
Lead and zinc	116.3	87.1	99.4	95.6	14.1	9.8
Drugs—ethical	204.9	161.7	192.8	176.6	19.2	9.2
Carpets, rugs	137.7	102.5	108.8	104.6	6.1	2.0
\$6, 10¢, \$1 chains	128.8	119.1	121.3	118.1	1.8	-0.8
Leather	192.8	158.6	156.6	154.6	-1.3	-2.5
Rayon	480.3	315.6	317.4	294.8	0.6	-6.6
Tobacco	97.8	92.6	80.8	74.4	-12.7	-19.7

Data: Standard & Poor's Weekly Stock Price Indexes.
* Early September, 1953 low.

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MARKETING



FLORISTS, one complaint runs, are more interested in art of arranging than in selling.

What's Wrong With Flowers?

Sales in the floral industry are badly wilted. One trouble: inability of florists to move in on mass market. U. S. is backing studies to find what can be done.

In a day when more and more so-called luxury products are making the transition to the mass market, some are finding the crossing very bumpy. Merchandisers of off-beat wares just can't find the groove sometimes, even if their product is something everybody likes. Yet chances are they will have to cross over if they are to keep going. Take the case of flowers.

• **In a Word**—Most of the floral industry would agree with the summing up of one wholesale florist: "Business is lousy." The biggest wholesaler in the country reports that in the last two months five wholesale concerns have begged him to buy them out to keep them from going broke.

The situation is so rough that Uncle Sam has taken a hand. Right now two big research programs are in the works, on money voted by Congress this summer. One involves four universities in the Northeast—Massachusetts, Penn State, Cornell, and Rutgers. The four are working out surveys to measure consumer attitudes and buying behavior, setting up tests for new merchandising techniques, studying present methods.

The other project involves government experimental stations in Alabama, Texas, Tennessee, Georgia, and Puerto Rico. The aim here, primarily, is to ferret out the potential market for southern flowers.

Leaders in the industry hope these long-term studies may come up with some answers. They believe the whole floral business is on the verge of a revival—if it will only heed the signs of the times.

• **Why So Hard**—When you have a product that is universally acceptable, why is it so hard to sell? The trade has two main answers:

• Florists are, in a sense, the victims of scientific advances.

• In their enthusiasm for their product, they are often blind to the need for merchandising.

Science has hit the florist in two directions. The wholesaler who found business lousy gave as his unhesitating explanation, "Nobody's dying." The slowed-up death rate makes a big difference to an industry that gets nearly 85% of its total \$14-billion yearly retail business from funerals and wed-

dings. Worse still, funeral notices in newspapers increasingly carry the message, "please omit flowers."

Science has made the headache more acute by stepping up the productivity of flower growers. Scientific planting, better methods of cutting and storing mean more flowers to sell. Wholesalers complain that growers are swamping the market.

• **Worse Than That**—But this is not the worst difficulty. M. Truman Fossum, agricultural economist, feels that the major handicap of the flow industry is not overproduction, but rather a failure to arouse latent demands. In other words, it's not doing a selling job. The carriage trade—to which the flower business traditionally caters—is saturated. But the industry hasn't begun to tap the sales potential of the everyday customer.

The truth of the matter is that the florist is a better aesthete than he is a merchandiser. He is apt to sit back and wait for the weddings and the funerals that give him a chance to use his artistic talents—while he lets the occasional customer slip through his fingers.

Growers can be as reluctant as the retailers to go after the mass market. "Why should the price of roses be determined by the length of the stem?" Fossum asks. "The market for long-stemmed roses is negligible, yet growers strive to produce long stems and seem to forget it's the bud at the top that the customer wants."

• **Competitors**—If the florists won't tap the mass market, the experts warn, other outlets will. Increasingly, cut flowers are turning up in supermarkets. Variety stores and department stores are taking a crack at them. These relatively new outlets still account for only a small part of the total business, but their share is growing. It's estimated that supermarkets, variety stores, and department stores did 5% of the total floral business in 1952, against 2.5% in 1945.

This trend is particularly strong in the South and the West. And in the East, food chains such as Penn Fruit Co. in Philadelphia and some of the Grand Union stores are now going along with it. Statistics on how well the flowers pay off are skimpy; some food stores simply lump flower sales in with "produce," have no check on whether flowers are a profitable item. Some stores feel that offering flowers is something of a frill, one more step on the road to one-stop shopping. Others feel there's a definite profit in flowers, provided the stores stick to flowers that are in season.

The florists have fought this trend tooth and nail. In Chicago they tried to push through a regulation that to handle flowers a shop must have a refrigerator designed just for that purpose. In Louisiana they backed legislation—which didn't go through—barring the sale of flowers in food stores because flowers treated with insecticides might contaminate foods.

• **Other Side**—Supermarkets argue that they aren't competing with florists; the people who buy there wouldn't buy at all if they had to go to a florist.

Some enterprising florists have countered with supermarkets of their own. One such is My Florist, Inc., which has set up flower supers in connection with department stores (BW—Apr. 18 '53, p126). Others have made a bold bid for the mass market. Podesta-in-Baldocchi in San Francisco will sell anything from a nickel's worth of flowers to \$500 worth. Tommy Luke, in Seattle, made a killing one Mother's Day when he handled 700 orchids at a special price of \$1.95.

• **Inside and Out**—Besides the ailments that are peculiar to the industry, florists—both wholesale and retail—suffer from more common complaints. Competition from the supermarkets is still a small factor, but competition within the industry is getting fiercer. Since the early 1940s, wholesalers have mushroomed, particularly in the South. Truckers who buy from growers and make the daily rounds of the retail shops have cut into the wholesalers' trade. Growers who find that the regular wholesaler can't get rid of his stock sell direct to the retailer.

What's more, the do-it-yourself gardener has probably hurt flower sales some. As more and more people push out into the suburbs, a huge new market is building up for plants—and this does not help the cut-flower business. Jackson & Perkins, big rose grower, for instance, sold all its plants through wholesalers prewar; today it sells 60% direct to the consumer.

• **Hope**—There are some signs that give the industry leaders hope that the tide will turn. Growers are learning the efficiencies that can come from specialization. In California and Florida this trend has led to a new breed of flower middleman. These are handlers who gather from the growers the flowers of the area, ship to the wholesalers across the country.

But the awakening comes slowly. For a year and a half the Society of American Florists has tried to get the trade to pledge \$600,000 toward a \$1-million nationwide flower promotion. So far the society hasn't got the money.

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Dressing Up the Bottle

Seagram stays out of the fancy decanter race but introduces a bottle holder—at extra cost. It hopes to spur holiday sales at minimum risk of overstocks.

By Labor Day, people who aim at winter markets must have done most of their thinking and a lot of their producing. Already, the liquor trade is tinkling with anticipation of this year's battle of the holiday gift bottles. Christmas stocks of liquor are going to be wrapped with more novel packaging gimmicks than ever.

First entry in the contest for Christmas gift trade was Seagram-Distillers Corp., with a "Golden Server" (above) for its 7-Crown blended whiskey and its V.O. scotch.

The server idea may start a new round in the bottle bout. Almost simultaneously with the debut of the Golden Server, Jack Daniels Distillery, Inc., came out with a similar gadget for its sour-mash bourbon. Daniels has a silver-plated basket for its square bottle. Both baskets were created by the Dave Chapman Industrial Design firm.

• **Ending a Holdout**—Until this year, Seagram was the most important holdout from the gift-bottle pitch that may have hit its peak last Christmas (BW—

Dec. 12 '54, p. 48). Seagram is still shying away from the special bottle idea, but its Golden Server brings it cautiously into the packaging fray.

The Golden Server is a latticed metal container polished to a golden finish. Along with it goes a golden medallion and chain to hang around the neck of the bottle, decanter-fashion. Seagram thinks this gimmick escapes the hazards of the fancy decanter.

Last year, several distillers cut themselves painfully by tying up too much capital and stock in the fancy bottles, salable primarily at Christmas and New Year's. Biggest casualties were suffered by Schenley Industries, Inc., whose policy of banking heavily on the fancy decanters helped to bring about a major shakeup in top management.

• **Still Popular**—This doesn't mean that the decanters haven't gone over with the public—they've been a hit ever since they first appeared nearly 15 years ago. This year's bottles, according to trade sources, will be fancier than ever.

However, distillers and distributors

are finding that the market is limited, that it can be quickly saturated. Distributors who overstocked last year found themselves holding a big bag full of the fancy bottles after the holiday buying season.

Then, too, the decanters cost money—up to 40¢ per bottle—yet distillers have been charging no more for them at wholesale or retail. The added cost is particularly hard for the lower-priced blends to absorb. Schenley Reserve, the first mass-selling blend to go into decanters, is a case in point. Schenley poured an estimated \$5-million into the bottle. It succeeded in shoring up sales, but value tied up in overstocks played a large part in Schenley's deficit by February.

• **Precautions**—Mindful of experiences like this, Seagram is trying to cover itself in its arrangements for the Golden Server:

- The server will cost the wholesalers—and presumably the retailers and the customers—a bit of extra money: around 50¢ for 7-Crown, 75¢ for V.O. scotch. This charge underwrites normal margins of profit; it also answers the consumer's feeling that "they must have cheapened the liquor in order to offer a fancy bottle."

- The server is intended to have year-round use and re-use. Backers of the fancy decanters had hoped their bottles would have secondary uses, too—as vases and candleholders, for example—but this idea never caught on, according to Seagram people. The server, however, can be used with any bottle, and it is expected to have year-round appeal for any kind of presentation, not just the holiday season.

- Seagram will keep its bottles the same shape, for brand recognition.

- Production of the servers will be limited at the start to around 200,000, with provisions for more later if demand warrants. Servers for 7-Crown will be all or mostly in quart-bottle size (in some states, it may be necessary to offer servers to fit fifths, too, to meet local regulations). Servers for V.O. scotch will be only in the fifths size, because scotch doesn't sell in quarts.

- **Silver Basket**—Jack Daniels' silver-plated basket for bourbon bottles will also cost the customer something extra. The price will probably be around \$1.25, plus jewelry excise tax. There's still some doubt about how the excise tax will be applied: whether it's only on the silver basket or on the whole package including the bourbon.

Some distillers are outspoken in their doubt about the effectiveness of extra-price gadgets in spurring liquor sales. The trade hears that some distillers are experimenting with give-away plastic baskets, others are relying on fancy glass bottles as in the past.

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Series, built with reserve power
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faster schedules with bigger
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direct or overdrive transmis-
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(shown) space-saver Comfo-
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142 to 193 inches. GVW rat-
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New High-Performance Standard!

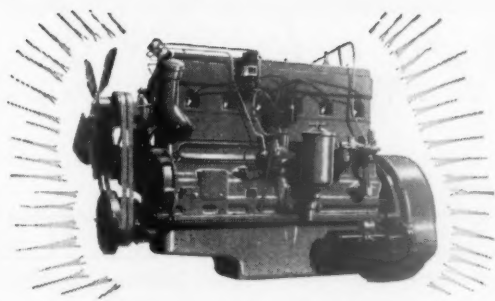
INTERNATIONAL — 22-Year Heavy-Duty Sales Leader
Announces another great new truck series!

Here's more leadership news from INTERNATIONAL — heavy-duty sales leader for 22 straight years! It's the great new 220 Truck Series, built with *extra power, less weight* to handle bigger payloads, faster!

INTERNATIONAL is the No. 1 choice of cost-conscious heavy-duty operators year after year for good, solid reasons: Every INTERNATIONAL Truck is Tough Job engineered to take it — *all-truck* built with no compromises anywhere — built and balanced to do its job around the clock at extra low cost per mile.

These same leadership standards make every INTERNATIONAL, from ½-ton pickups to 90,000 lbs. GVW off-highway models, your best truck buy. See your INTERNATIONAL Dealer or Branch for the *right* truck to cut your operating costs.

INTERNATIONAL HARVESTER COMPANY • CHICAGO



Brand New 201 hp Royal Red Diamond Engine!

Newest and most powerful of the famous INTERNATIONAL built Red Diamond Engines! 501 cubic inch displacement—201 hp —430 lb-ft torque for maximum efficiency at low rpm—New precision-set, special alloy sleeve-

less cylinder block—Newly designed 4-barrel carburetor — Long Life sodium-cooled, stellite-faced slo-roto exhaust valves — Chrome top rings — U-flex oil rings—Tough, rugged, all-truck high-performance power.



International Harvester Builds McCORMICK® Farm Equipment and FARMALL® Tractors... Motor Trucks... Industrial Power... Refrigerators and Freezers

Better roads mean a better America

INTERNATIONAL® TRUCKS

"Standard of the Highway"

Price War Counterattack

Fair trade forces battle discount houses on several fronts . . . Study probes "psycho-seasonal" buying . . . Whither goes the buck borrowed from small loan companies.

In today's market climate of hot competition, discounts and off-list selling are flourishing. The same economic weather is spurring proponents of price maintenance systems to counterattack. Last week, the battle between these two forces got even hotter, with the fair traders making some headway on these fronts:

Washington loophole—This is the legal question whether a discounter (Masters, Inc., of New York) can use an area where there is no fair trade statute (Washington, D. C.) as a base of operations from which to advertise and ship fair traded items into a fair trade state (New York) at cut prices. Last week, New York Federal Judge Weinfeld issued what may become a key ruling on a test case brought by Sunbeam Corp. against Masters:

If the fair trade appliance maker can prove that Masters set up its D. C. store just to get around an injunction against cutting fair trade prices in New York, then Masters is in contempt of the New York court, even though Masters' D. C. store is a separate corporation.

Repentant price-cutters—In a move to stop price slashing on fair traded items (or items carrying manufacturers' suggested minimums), Ekco Products Co. and Philco Corp. temporarily quit shipping to distributors in price-cutting areas (BW—Aug. 14 '54, p81). Last week, Ekco announced 20 of the 35 distributors it had disenfranchised in New York had signed new, tougher fair trade contracts. Magnavox Co. is following the example of Ekco and Philco; revealed last week that it has disenfran-

chised all its retail dealers until they promise to hold the price line.

Department store pressure—A number of large department stores are reported to be fighting back, too, pressuring manufacturers not to sell to discount houses or to distributors who sell to price-cutters.

In non-fair trade Missouri, the three biggest St. Louis department stores have started an all-out ad war against local discounters—slamming "undercover deals" and promising that their stores won't be undersold. Similar campaigns have been tried by stores in Atlanta, Detroit, and Houston.

The Small Loan Spread

When a potential consumer walks out of a small loan office, chances are better that he has borrowed the money to consolidate overdue bills rather than to go shopping. At least that's the picture you get from a nationwide survey of 1,800 small loan offices, which will be presented at the annual convention of their trade group, the National Consumer Finance Assn., in San Francisco this month.

About one third of the average loan—which runs just over \$300—goes to pay previous debts, the survey shows. New purchases account for 26%, with cars, clothing, home repairs or furnishings ranking in that order. New medical expenses take up nearly 12%, with another 7% allotted to travel and vacation. A scattering of expenses makes up the rest.

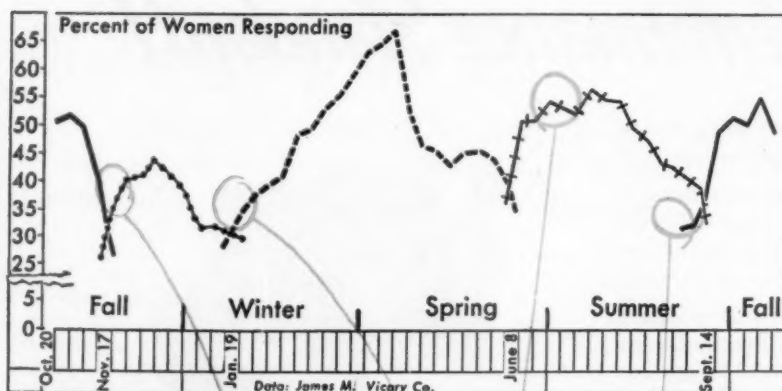
MARKETING BRIEFS

Industrial marketers now have a plan book of their own. Industrial Market Planning Workbook, just published by McGraw-Hill Publishing Co., gives manufacturers who sell to industry some yardsticks, on which they can determine how good one area is compared with another; what potential of each area is for his product. List price: \$20.00.

Color TV price notes: CBS-Columbia set prices for its Colortron "205" sets at from \$950 to \$1,100 at retail. . . . Stromberg-Carlson followed RCA's lead in halving prices of its 15-in. television sets, now down to \$495 (BW—Aug. 21 '54, p44).

Stouffers restaurant chain is test-marketing sales of frozen dinners in Cleveland and Akron areas. It is offering frozen, ready-to-eat-on-thawing meals. Items included are 4 appetizers, 17 entrees, 9 vegetables, 4 desserts, and 5 sauces.

"Spring" is a State of the Buyer's Mind



When do women's buying fancies turn to thoughts of spring—or any of the other seasons? This chart shows the answers to the question of "psycho-seasonal buying" that were turned up by the James M. Vicary research company in a year-long survey of nearly 5,500 adult women readers of Family Circle Magazine, Ladies' Home Journal, and Woman's Day.

Here's how the survey worked: Women were asked the association test word "season," and responded with "spring," "summer," "fall," or "winter"—presumably according to the season uppermost in their minds at the time they were interviewed. The chart above represents the length of time that each season first popped into the minds of the greatest

percentage of women.

Results, released this week by Family Circle, hold some interesting statistical hints on seasonal advertising:

Spring, for example, was on the tip of most interviewees' tongues long before its actual calendar arrival date. Yet it is just when the ladies first start thinking about that new Easter outfit—in January—that consumer advertising takes a steep tumble, according to Family Circle. **Summer**, as well as spring, dominates prospective shoppers' thinking for a long period of time. **Fall** ideas are beginning to germinate in consumers' heads by July and August, when advertising takes another big dip, the magazine points out. **Winter** is thought about for the shortest time.

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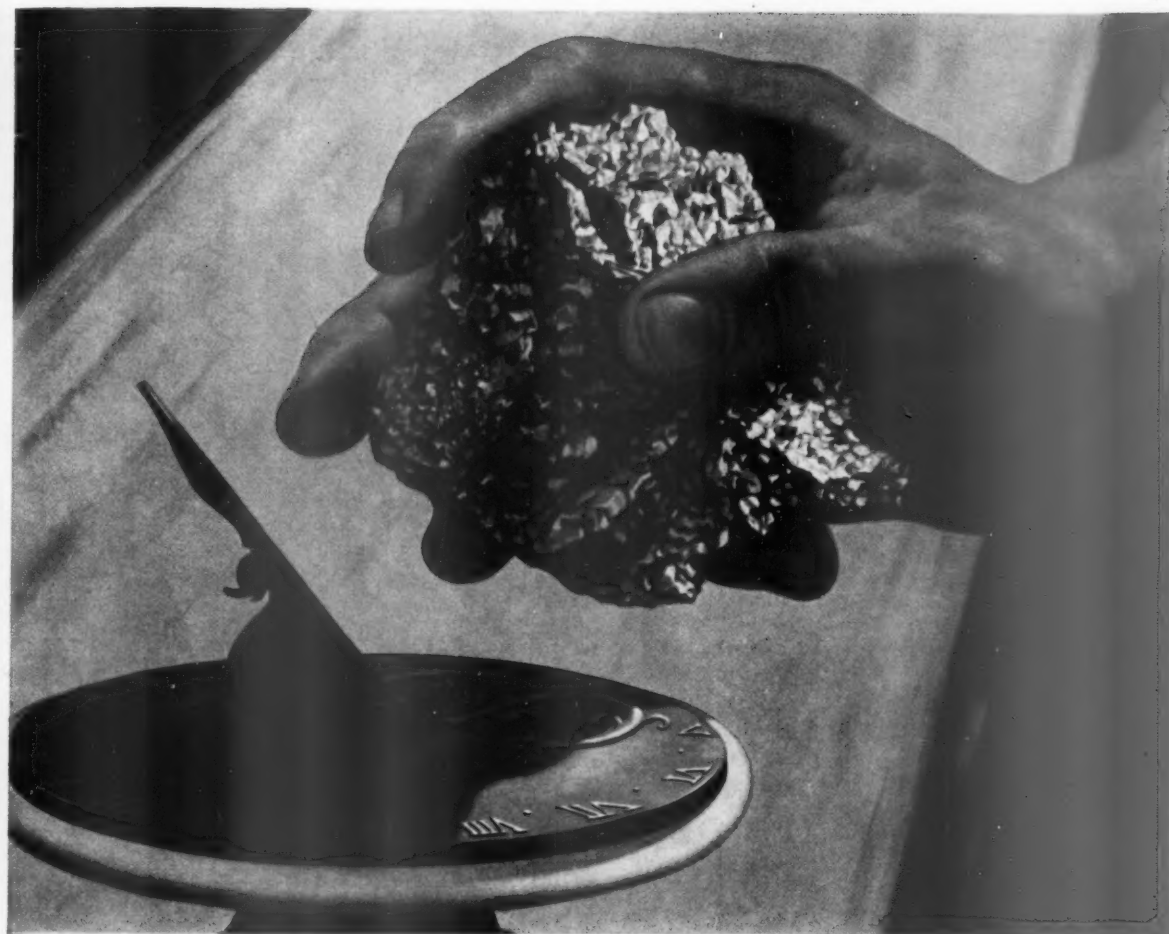
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The metal that makes time stand still

Thanks to chromium, steel now serves you with strength and beauty that lasts a lifetime

IN TIME, one of man's most useful materials—steel—is often the victim of such destructive forces as rust, corrosion, heat, or wear.

THESE NATURAL ENEMIES of steel now are mastered by the metal called chromium. When the right amount of chromium is added to molten steel, the result is strong, lustrous stainless steel that defies the ravages of time.

IN HOMES, TODAY, stainless steel is a shining symbol of modern living. It brings us care-free sinks, gleaming tableware and kitchen utensils—all with beauty that lasts a lifetime.

IN INDUSTRY—Food is prepared in super-sanitary stainless steel equipment. Streamlined trains and buses are made of this wonder metal. Vital parts of jet planes


that must withstand both blazing heat and sub-zero cold are made of tough, enduring stainless steel.

SERVING STEEL...AND YOU—The people of Union Carbide produce alloys of chromium for America's steel-makers. This is another of the many ways in which UCC transforms the elements of nature for the benefit of everyone.

FREE: For the full story of the everyday miracles made possible by alloying metals such as chromium, write for the illustrated booklet, "Hot-Metal Magic." Ask for booklet G.

UNION CARBIDE

AND CARBON CORPORATION

30 EAST 42ND STREET  NEW YORK 17, N. Y.

In Canada: UNION CARBIDE CANADA LIMITED

UCC's Trade-marked Products include

ELECTROMET Alloys and Metals	NATIONAL Carbons	ACHESON Electrodes	SYNTHETIC ORGANIC CHEMICALS
HAYNES STELLITE Alloys	PREST-O-LITE Acetylene	Dynel Textile Fibers	PRESTONE Anti-Freeze
LINDE Silicones	EVEREADY Flashlights and Batteries	PYROFAX Gas	BAKELITE, VINYLITE, and KRENE Plastics
			UNION Carbide
			LINDE Oxygen

Wanted: an inspector with a split-second eye

*—photography
got the job*

A difference of 2/10ths of a second means the compass passes or fails. So the maker pits it against a stop watch—gets definite proof of performance with movies.

Uncle Sam said this aircraft compass must respond by 5 degrees in not less than 1 second or more than 1.2 seconds.

That amounts to only 2/10ths of a second leeway—far too little for human hands and eyes to catch the action accurately.

So, side-by-side, the stop watch and compass act their parts before the movie camera. Then frames along the film show

the precise instant the 5 degree mark is reached.

Product testing and quality control are naturals for photography. They are typical examples of the many ways photography works for businesses, large and small. It is improving production, saving time, reducing error, cutting costs.

It can work for your business too. How? Check the list (at right) and see.

Illustration shows test of aircraft compass at United States Gauge, division of American Machine and Metals, Inc. A magnetic force, developed by the loops, pulls the compass card 30° off its normal heading. Then the force is released. The instant of the release and the moment the compass recovers by 5° are both recorded on the film—become positive evidence of proper performance.

Eastman Kodak Company, Rochester 4, N. Y.

Kodak

TRADE-MARK

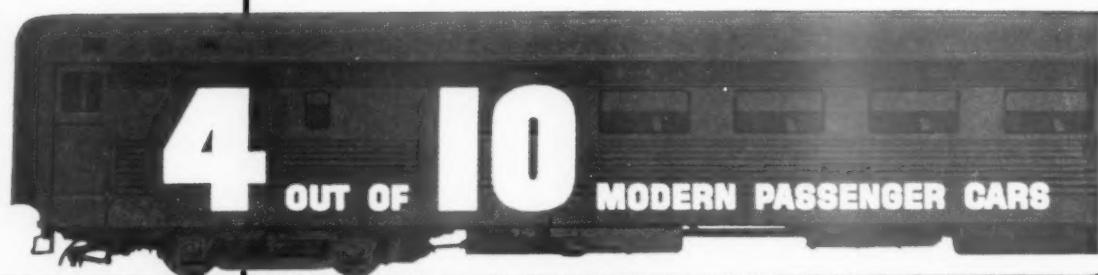
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... and here are 16 basic places where Photography can work for you
—5 minutes with this check list can be the soundest business move you've made this year

- ☐ **Management**—Progress photos, Stockholder reports, Record preservation, Information distribution, Control charts, Organization charts
- ☐ **Administration**—File debulking, Purchase schedule, Office layout, Interior decoration, Form printing
- ☐ **Public Relations**—News release, Institutional, Community relations, Public service
- ☐ **Training and Safety**—Safety campaigns, Teaching, Reports, Fire prevention
- ☐ **Personnel**—Identification photos, Job description, Orientation, Payroll records, Employee personal records, House organs, Health records, Bulletins
- ☐ **Plant Engineering & Maintenance**—Plant layout, Repair proposals, Piping & Wiring installations, Progressive maintenance, Record debulking
- ☐ **Research**—Reports, Flow studies, Process charts, Library, Photomicrography, electron-micrography, x-ray diffraction, etc.
- ☐ **Product Design & Development**—Styling, Consumer testing, Motion studies, Stress analysis, Performance studies
- ☐ **Purchasing**—Schedules, Duplicate engineering prints, Specifications, Component selection, Source information
- ☐ **Engineering**—Drawings, Specification sheets, Drawing protection, Pilot radiography
- ☐ **Production**—Time study, Work methods, Legible drawings, Schedules, Process records
- ☐ **Testing & Quality Control**—Test set-ups, Reports, Standards library, Radiography, Instrument recording
- ☐ **Warehousing & Distribution**—Inventory control, Damage records, Waybill duplicates, Flow layouts, Packing & loading records
- ☐ **Advertising**—Advertisements, Booklets, Displays, Dealer promotion, Television
- ☐ **Sales**—Portfolios, Dealer helps, Sales talks, Price & delivery information
- ☐ **Service**—Manuals, Parts lists, Installation photos, Training helps, Records

Send for free booklet.
"Photography U.S.A."
illustrates how photog-
raphy is working for
others—suggests ways it
can start working for
you. Write for it.





ARE NOW HYATT-EQUIPPED!

Yes, they're mighty impressive figures—but the reason behind this success story is even more impressive. HYATT is America's largest, oldest, and most experienced builder of railroad roller bearings. We produced the first set ever used 60 years ago. And now we have developed a new design that will substantially reduce the cost of applying roller bearings to freight cars—a significant contribution to rail progress that adds even greater stature to America's *FIRST* name in railroad roller bearings! Write today for full details. Hyatt Bearings Division, General Motors Corporation, Harrison, New Jersey.



HYATT

Roller Bearing Journal Boxes

STRAIGHT 

BARREL 

TAPER 

PERSONAL BUSINESS

BUSINESS WEEK
SEPT. 4, 1954



It's time for hunters—experts and novices alike—to start preparing for the fall season. Following a basic checklist will help you avoid last-minute rush and unforeseen difficulties:

- Check your equipment carefully—guns, clothing, ammunition. Make a list of items that need repairing or replacing.
- If you're planning a different kind of hunting than you're used to—or are just taking it up—make sure you have the special equipment needed.
- Get all the information you can on hunting areas you are planning to visit for the first time. State conservation departments are a good source.
- Be sure to read up on state game laws. There have been a lot of amendments and other changes this year. One example: Big-game hunters (deer, bear) in New York State must now wear a numbered back patch.

If you're one of the many people just taking up hunting, you'll need to be even more thorough. First move is to decide what type of hunting you want. Then get either a shotgun (for birds) or a rifle (for deer and bear, or small game).

You'll find so many types and varieties that choosing a gun on your own will be tough. Best bet is to rely on the gun man of a top sporting-goods store. He can give you the advantages of each, help you pick one that handles best for you.

In shotguns, you might look at the new Winchester Model 50, a three-shot automatic selling for around \$120, less extras. It has a radically new combination of nonrecoiling barrel and an independent chamber.

In rifles, Abercrombie & Fitch says that the Winchester Model 70 is most popular—mainly because it uses a wide variety of ammunition; a choice of caliber sizes from 220 Swift to 375 Magnum.

However, don't let popularity or newness be your sole guide. You'll be happiest with the gun that suits you—and your purposes—best.

Consider telescopic sights if you get a rifle. Advantages: positive identification of game, a clear picture of the target. There's a safety factor, too—a man never looks like anything but a man through a scope.

You can get scopes ranging from 2½ to 10 power. Most big-game hunters prefer 2½ to 4-power magnification. The 2½ provides a wide field of view (about 40 feet at 100 yd.), is best for short-range shooting (up to 200 yd.), where speed is important. Sights cost from \$20 to \$150.

Proper clothes are important. For hunting birds, you should have 10-in. or 12-in. boots (rubber for duck-hunting), woolen socks, khaki breeches or slacks, canvas hunting coat over a light flannel shirt, water-repellent cap.

You can use practically the same clothes for deer hunting, with one vital exception: Outer garments must be colored—all red, or red-and-black checked. Also, remember that deer-hunting weather is a lot colder than that for birds. You'll need heavy underwear.

If you feel that learning about guns is not exciting enough, consider archery. Bow shooting for deer is allowed in most every state. Moreover, in some states, like New York, the deer season is two weeks longer for archers, and bowmen can shoot either buck or doe.

PERSONAL BUSINESS (Continued)

BUSINESS WEEK

SEPT. 4, 1954

The reason for this, of course, is that your chances of killing a deer with bow and arrow are a lot slimmer. But devotees say it's far more satisfying as a sport, since it puts hunter and hunted on a more equal footing.

Normal hunting range is from 30 to 50 yds.; bows usually have a 45-lb. pull—not extraordinary strength for the average person. You can get a good bow-and-arrow set from \$40 to \$100.

You'll need practice if you expect to kill game. One expert says three afternoons a week with the bow will be good training.

Regardless of what weapon you use, stay off land that's posted against trespassing. A landowner can take a trespasser to the local justice of the peace. The result is a fine—usually \$25.

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Don't assume that the recent Emergency March of Dimes campaign means that tests of the Salk vaccine have failed as a weapon against polio. The two have no connection.

Results of the vaccine tests won't be known until early next year. Evaluation is just beginning at the University of Michigan; right now no one has any idea what the results will be.

Main reason for the emergency campaign was that the March of Dimes failed to get the money it needed during its regular campaign for financing research, caring for 67,000 polio victims from past years—and caring for this year's victims.

This year's cases will add to the burden considerably—so far they are near-record proportions, although below last year's number. There's still time to go before cases start falling off: 80% of polio cases occur from July through October.

Gamma globulin (not to be confused with the Salk vaccine) may hold down some cases. However, it is scarce. Government controlled, it is released only to small areas reporting a case of polio. It is only a temporary measure, seems to hold against the paralytic effects of polio.

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Before buying a house, take a close look at the basement. It can tell a prospective buyer more about the history—and the future—of the house than most other areas.

A dry basement is insurance for a long lifetime for a home. To make sure it's always dry, look for water stains on walls, large cracks in concrete. Also, you can see the condition of the plumbing in a cellar, whereas it doesn't show up elsewhere.

Check to see that the sills are bolted to the masonry. Stick a knife into it to make sure the wood is sound.

—•—

Chess players who have been brought to their knees by tricky plays or flim-flam can now learn how both to spot and top them—if they are willing to stoop to conquer.

Chess Traps, Pitfalls, and Swindles, a new book by I. A. Horowitz and Fred Reinfeld (Simon and Schuster, \$3.50) diagrams the unorthodox exceptions to the rules. You can get it in your bookstore.

Photo courtesy of Harter Corporation, Sturgis, Michigan



It's good management
to work relaxed on
U. S. Koylon Foam Cushioning



You never have to exert yourself to get comfortable in these handsome chairs—they do *all* the adjusting to you. U. S. Koylon Foam Cushioning gives perfect posture support in any position with a firm, positive buoyance that helps you feel alert and rested. This is important for the long hours of your working day. But pure comfort is just one of the benefits of this finest of foams. U. S. Koylon Foam Cushioning always looks smooth, tailored, unwrinkled—no matter how often it's sat upon. It holds the neat, trim lines of good furniture for years... can be recovered with ease. For distinction and efficiency in office furniture, look for the U. S. Koylon Foam Cushioning label.

U.S. Koylon
FOAM
Cushioning



UNITED STATES RUBBER COMPANY • ROCKEFELLER CENTER • NEW YORK

Portland—boom town—is busting its breeches with increased population, shipping and industry. The challenge triggered a quarter billion dollar building spree with sites for ① \$13.5-million hotel and ② \$20.5-million shopping center already cleared for construction. Completed are office buildings ③ and ④. Bridge (extreme right) and many other landmarks will be replaced with modern structures. This is only part of what happens when . . .



A Building Alarm Wakes a Long

Portland (Ore.) citizens were rudely awakened one morning when the West's biggest trade exhibition, the Pacific Automotive Show, looked at the town's dilapidated municipal facilities, shuddered, and moved on to Portland's big rival—Seattle. The trade show's turndown acted as a jangling alarm. The sleeping city jumped up, groped around for money, and rushed helter-skelter into a quarter-billion-dollar building boom.

Local voters, traditionally tight with the purse strings, gave city officials the green light to spend millions on a staggering array of civic projects. While the municipal program was in the planning state, an outsider—Leo F. Corrigan, millionaire hotel man from Dallas—picked up the ball for private construction by backing a much needed \$13.5-million downtown hotel, the first new one in 26 years. Other private

groups carried the ball from there.

• **Surrounded**—What set the alarm? The answer is simple if you look back a few years. The Pacific Northwest was growing fast. It grew up right around sleeping Portland. The city, on the Willamette River (which runs into the Columbia), suddenly found that it was fast becoming the West Coast's major seaport and distribution center for a territory equal to New York, Pennsylvania, Massachusetts, Michigan, Ohio, and Illinois combined.

Portland's population was nearing the million mark—up 50% since 1940.

Fifty steamship lines, five railroad systems, seven airlines, 1,000 trucking outfits, and 30 inland waterway companies fanned out from the port's hub to take care of the rapidly increasing shipping tonnage. But there were no new buildings, bridges, or roads to take on the new tenants.



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• **All at Once**—Most cities grow along with the surrounding territory—gradually. But not Portland. The building boom now under way will do at one clip what most cities undertake over a period of 25 years. Everything in Portland—like the One Hoss Shay—fell apart at once. The hotel and office building situation was unbelievably bad, the docks were run down, bridges were at least 40 years old, highways, schools, city buildings, and even the zoo were pathetically obsolete. The sleepy city was just getting too big for its old pre-war breeches—and something had to give.

• **Private**—Citizens ordered a change—and here's what they are getting from private builders:

• A \$20.5-million shopping center, to be built by the Lloyd Corp. of Beverly Hills.

• Another shopping center to ex-

ceed \$10-million—this one to be built by a local firm, Meier & Frank Co., to compete with the Lloyd center.

• The \$13.5-million downtown hotel (to take shape early next year).

• A \$30-million Sunset Oil Co. refinery—biggest single plant built in Portland.

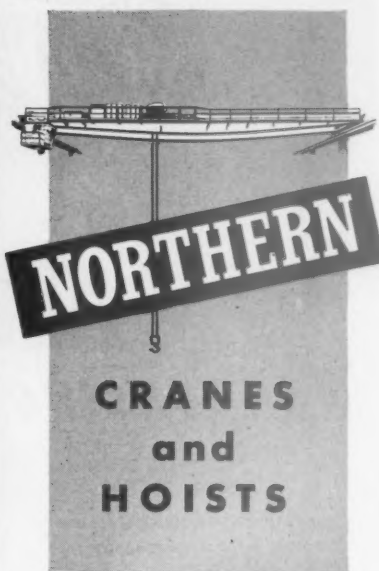
• A warehouse distribution center costing \$10-million, which Safeway Stores, Inc., will build on city limits.

• **Public**—City and state governments have an even bigger list of projects. Here are a few:

• Exposition-recreation center costing \$8-million.

• Improvements of the Morrison Bridge—at extreme right in aerial photo (around \$12-million). Another \$3-million ramp project for Hawthorne Bridge—upper left in picture.

• Docks to get \$6.6-million face lifting and a \$2-million grain elevator



Look Overhead...

See "NORTHERN"

"NORTHERN" — the name you see on overhead electric cranes in industrial plants of all kinds wherever you may be, because NORTHERN — since 1899 — has been a leader in industrial crane design and construction.

The name "NORTHERN" represents faithful adherence to uncompromising design, quality controlled machining, and closely inspected fabrication. "NORTHERN" Cranes and Hoists have an extra margin of safety — give dependable, fast service under the most rugged, emergency conditions — are notable for fine, standard-type electrical equipment and controls for precise manipulation and quick, easy maintenance with minimum downtime.

Let us send you Crane Bulletin SE-108-A
Hoist Bulletin H-112

NORTHERN ENGINEERING WORKS

210 CHENE STREET
DETROIT 7, MICHIGAN





ANNOUNCING... Clarage Type XL Industrial Fans

EXCEPTIONAL EQUIPMENT for industrial air and material handling!

For 40 years Clarage has been manufacturing fans for industrial services, as well as equipment for other air handling and conditioning assignments. Now, with

the new Type XL Fans, Clarage offers equipment of advanced design to answer the most modern industrial requirements. Rugged construction, high efficiency, and in-the-field adaptability are important distinguishing features.

Full details await you in Bulletin 702.
CLARAGE FAN CO., Kalamazoo, Mich.



97 OF THE 100 LARGEST CORPORATIONS IN AMERICA ARE USING CLARAGE EQUIPMENT

men **want** this business gift



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. . . that 3 out of 4 men reported they need a new billfold.

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Buy Only DFPA-Graded Marked Panels

to make

QUICK CONTACTS

with the national business market use clues

See Clues on page 154

expansion (this will be largest on West Coast, capacity 7.4-million bu.).

• For International Airport, a possible \$10-million improvement; for the present "disgraceful" zoo, replacement by a \$3.8-million zoological garden on top of a West Side hill.

• Highways: Already under way are the \$17-million Banfield Expressway, which will take U.S. Route 30 traffic nonstop into town—a \$13-million interstate bridge across the Columbia River—and a \$19-million direct route to the state capital, Salem, 48 miles away. The state plans more than \$100-million in additional highways, many of them going into Portland.

• Schools: A \$3.5-million high school was started in July, along with a \$2.2-million state dental school. The dental school will be next to a partially completed \$6-million medical school hospital.

• Just a Starter—This is only the beginning, city officials and local businessmen say. Several large merchandising companies are thinking of making Portland their West Coast headquarters. A market of 10-million people lies to the south in California, and there are more than 5-million in the surrounding territory. Industry in Portland used to be centered around lumber. However, the now stagnant sawmills (BW—Jul. 31 '54, p114) are moving out, and distributing firms and machinery manufacturers are taking over.

Industrial interest in Portland has taken on new life with announcements of the building splurge. Up till then, big companies had steered clear of the city as a headquarters site because of the lack of office space. Sales and trade organizations used to give it a wide berth because of lack of hotel and show room facilities. The last big exposition or fair that old-timers can remember was the Lewis & Clark Exposition in 1905. The huge Pacific-International Livestock Exposition barns and the old Ice Arena were recently closed as fire hazards. But now, new exhibition grounds and buildings are in the works, to give the city a gay come-to-the-fair appearance. The Chamber of Commerce secretly hopes World's Fair planners will pick Portland for the next camp site.

• Faster, Faster—The once slow-moving city is beginning to dance to a faster tempo. Talk of building and more building is everywhere. City fathers are even discussing the possibility of putting another \$20-million capital improvement program (including a new city hall) before the voters this fall. Some of the more conservative officials think this might be stretching their luck a bit too far.

• Electrifying—Getting the conservative element to go along with the gigantic building programs was not

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easy. Editorials in the crusading Oregon Journal under the head, Big League City or Sad Sack Town stirred up the voters by telling them they had more than enough money now, but wouldn't have it later on if they let the city go to pot.

Portlanders paid only \$16 per \$1,000 property valuation in 1952 compared with \$31.30 in San Francisco. Per capita property taxes have gone up less than half as much as residential values. The paper, quoting these figures, said, "You can afford it." Citizens, constantly humiliated by such tags as "Dead Town" or "Square City" hung on Portland by visitors, were sold on the building plan. They agreed to buy a "new look."

The effect was electrifying—West Coast builders say Portland is the country's biggest "boom town." They hope other sleeping cities will hear the alarm and wake up in similar fashion to their new surroundings.

REGIONS BRIEFS

Ohio turnpikes are branching out in all directions. To connect the southern part of the state with the pike already under construction in the north, engineers have drafted plans for a toll road from Cincinnati to a point near Columbus. There it will branch northwesterly and northeasterly to meet the northern pike near Toledo and Akron. This would give the state 650 miles of toll highways.

Maryland is enjoying a well drillers' boom. Development of home sites in the counties, beyond city water mains, is largely responsible. But even industries are tapping underground water sources, according to the state's Dept. of Geology, Mines & Water Resources. Five times as many drilling permits have been issued this year as last. Commercial and industrial establishments alone ordered 106 wells this year with a total capacity of 5-million gal. daily.

Nearly \$80-million worth of new defense plants in Ohio Valley and Pennsylvania areas have qualified for fast write-off, according to the Office of Defense Mobilization. They will be located in areas that have been suffering from chronic unemployment. Stretching from Scranton, Pa., to Ravenswood, W. Va., the plants will employ nearly 3,800.

Hawaii Filipinos have a "formal invitation" to put some of their capital into enterprises back home. Retail trade in the Philippines, formerly in the control of alien Chinese, must by law revert to Filipinos.

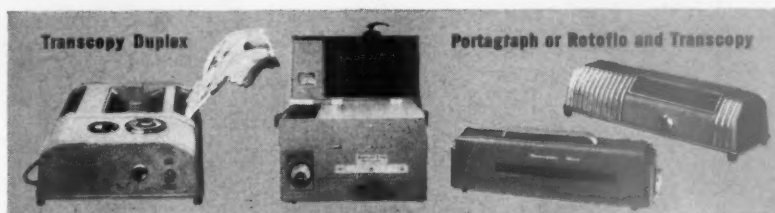
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when the music stops!

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Brother, you've had it. Or, rather, your circuit's had it. You'd be tired out and burned up, too, if you had to carry more than your share of the load. You've just caught the backfire from inadequate wiring.

Did you ever stop and think how many conveniences in your home these days are electrical? Range, vacuum, toaster, power tools, washer, clothes dryer, radio, TV, air-conditioner, fans, coffee maker, freezer — well, why go on. You get the picture. And there are more electrical wonders to come.

The number of appliances in use in the average home has increased four-fold in the last 25 years. The average home, apartment or office building when built was wired for only a 20 or 30% increase in electric load. Can you see why 4 out of 5 buildings are inadequately wired today?

How's your house? Or place of business? Think it's adequately wired? Be sure—talk with your local electric light and power company . . . get their counsel. They don't have anything to do with the wiring *inside* your home but they do handle the power that goes into it. They want you to get the most out of it. Or, if you'd prefer, write us for your free copy of "Getting The Most From Your Home's Electrical System."

This message is the fourth in a series sponsored by Electrical World . . . for 80 years the basic reference of the operating and management men in America's great electric power industry. Electrical World serves them fast and faithfully each week with the industry's news, plant practice and technology. Here in its editorial pages an industrial giant lives and breathes and plans ahead. Here in its advertising pages the leaders do business with the leaders.

Electrical World



PRODUCTION

Case History of GE's New Industrial Solenoid

Highly competitive major line. Big automation equipment

Product should be smaller

New model will be competitive because of savings through standardization, new methods

Emphasize: Smaller size Longer life Better coverage Lower cost

Product seems to have what is wanted

COMPLETION DATE	STANDARD PRODUCT DEVELOPMENT TIMETABLE
Dec 52 ✓	Run a market survey
Jan 53 ✓	Work up a business summary
Jan 53	Brief the management
Jan 53	Set a tentative release date
Jan 53 ✓	Prepare functional specs
Feb 53 ✓	Issue design specifications
Feb 53	Request preliminary funds
Mar 53	Rough out sketches
Mar 53	Decide on a name
Mar 53	Get go ahead from management
Mar 53	Order hand-made samples
May 53	Double check the competition
Jun 53 ✓	Estimate manufacturing costs
Jun 53	Set a price policy
Jun 53	Test hand-made samples
Jun 53 ✓	Set final release date
Jun 53	Obtain formal appropriations
Jun 53	Decide on final drawings
Jun 53	Issue manufacturing orders
Jun 53 ✓	Activate transition committee
Jul 53	Work out packaging
Jul 53	Prepare wiring diagrams
Aug 53	Order tool-made samples
Apr 54	Issue manufacturing instructions
May 54 ✓	Prepare product summary
May 54	Get final OK from management
May 54	Present to district sales staffs
May 54	Start mass production
May 54 ✓	Finish up lab tests
Jul 54	Develop selling aids
Aug 54 ✓	Build up warehouse stocks
Sep 54	Public announcement

\$2-million a year business for GE Share of market dropped from peak of 50% in 1925

Product size can be squeezed down with new materials

September 1954

Don't get caught with too many old models but have enough renewal parts for the market

off to a slow start, but possible to catch up

Keeping a New Product on Track

The layman probably wouldn't recognize a solenoid if he fell over it, although he has seen thousands. But solenoids are important to industry. They're behind-the-scene devices used to convert electrical energy into straight-line mechanical motion in hundreds of machines such as electrical brakes, spot-welding equipment, louver actuators, machine tool cutters.

This week, the General Purpose Control Dept. of General Electric Co.

announced a redesigned industrial solenoid.

Solenoids account for about 11% of annual sales for the GPC, one of the largest of the company's 80-odd operating departments. These devices are widely used in GE's automatic equipment, and their dollar value to the company will probably increase as the trend toward automation speeds up.

• **First Child**—The new solenoid, however, is significant for another reason.

It's the first major industrial product to emerge from an elaborate product-planning program that has been taking shape in the company over the past few years. Product planning is the system GE will be using from now on to develop new industrial products. It replaces the familiar committee system, and GE officials appear convinced that it offers at least two major advantages over the older method:

Objectivity. Product planning uses

formalized, "scientific" approach. Charts like the one facing provide management with cold facts. They make it a lot harder for a fast talker to skim past a bottleneck.

Opportunity. Product planning is providing many new jobs for bright young men. In effect, it puts an additional rung in the management ladder between the specialist level and the top. While it aims at nourishing individual initiative, it channels this energy along useful lines by eliminating much of the emotion and log-rolling that so often develops in a committee.

• Behind the Switch—To understand why GE has adopted product planning on a large scale, you have only to look at the phenomenal growth of the electrical industry in the last 15 years. GE's sales of over \$3-billion last year were roughly 10 times what they were in 1939. But the surface has only been scratched, according to forecasters. The industry expects to build as much electrical equipment in the next 10 years as it has in the past 75.

GE took a careful look at itself some time ago and found that its enormous size was making it unwieldy. Smaller competitors were more sensitive to new markets.

Two and a half years ago it embarked on a long range decentralization program that split the overgrown departments like amoebas. Under the new plan, each department includes only a small group of related product lines. The general manager has full profit responsibility. He operates, in short, like the president of a smaller firm.

• Broader Field—Product Planning is one of the features of this administrative reorganization (BW—Apr. 18 '53, p. 142). It's a service placed under the wing of the marketing section. While many of the key people in product planning have come from engineering, the job was given to marketing because it had wide customer contacts.

Product planning differs considerably from department to department—depending upon the product lines. In some, it is a large staff of 20 to 30 people; in others, one man; in still others it's a part-time job for a member of the marketing group. But the function is the same in all departments.

• Case History—Take the case of the solenoid. Marketing manager Joseph Gauss and product planner John Lewis reported in December, 1952, to William F. Oswalt, general manager of GPC, that solenoid sales were going up steadily, but that GE's share of the total market was dropping. Lewis' survey group had found that the old solenoid was not adaptable to a number of new machines coming on the market. The competition was moving into these

new fields and the sales force could do nothing about it.

Oswalt had to make a decision. He had three choices: (1) He could continue in a highly competitive field with a product that had some drawbacks but a lot of satisfied users; (2) he could drop the line entirely and concentrate on some other product where the competition was less aggressive, or (3) he could redesign the old product and aim at leadership. Oswalt chose the last.

From that point on, the story of the development of the new line is told in the chart on facing page. The product planner keeps the books, but he has no police authority. A glance at the chart, however, shows the boss how the product is coming. A broken tool or a strike can hold up the schedule, but the boss can see this problem in perspective and take appropriate action. If someone is obviously dragging his feet, that shows up too. The boss can say it's time to fasten on the roller skates.

• Simplified—In effect, GE has brought a lot of nebulous and informal duties out into the open and made one man responsible. Every action of the product planner was done somehow by somebody under the old system. The difference is that now all the responsibility is centered in one man. Duplicate actions are eliminated. The boss can deal with specific products for specific markets, answer specific competition. Oswalt sums up the new system with the one word: "Crisp."

• Protecting Customers—On the whole, manufacturers of industrial products have been slower to adopt this formal approach than have consumer products manufacturers. The reason lies in the products themselves.

In the dress industry, for example, style is a big factor. A lot of effort goes into making last year's model obsolete. But with industrial products, the emphasis is on long life. With parts renewal programs, industrial product manufacturers insure that components will last indefinitely. Any new industrial product has to be vastly superior before a mechanic will throw away one that's functioning adequately.

Long life makes miscalculations much more serious in industrial products. An automobile manufacturer, for example, can have a bad year, but design changes can pop him into the lead the next year.

If an industrial product manufacturer makes a miscalculation, the man who suffers is his customer, the machine builder. He has to tool up and design his whole machine around such parts. If they are not right, it may take several years before he can afford to redesign his machine and use a more appropriate component.

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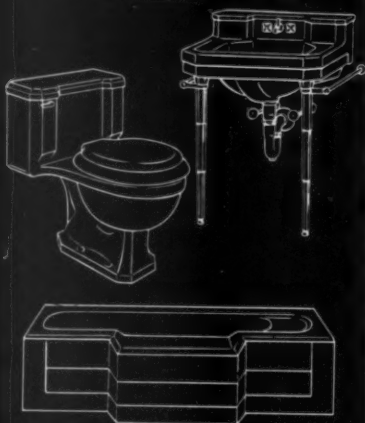
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Plastic Pipe: Here to Stay

Larger companies—with more money for research and promotion—are beginning to show an active interest in the potential market for this competitor of metal pipe.

This week in Gary, Ind., Naugatuck, Conn., and Louisville, Ky., completely unrelated developments are taking place that will have a profound effect on that vigorous youngster, the plastic pipe industry.

National Tube Div. of U.S. Steel Corp. is putting the finishing touches on facilities for producing a wide variety of plastic pipe at its Gary plant. It may be a full-scale move by a big-name competitor to capture a portion of the market now dominated by small plastic shops.

Naugatuck Chemical Div. of U.S. Rubber Co. is completing new facilities for production of Kralastic (a resin-rubber blend). This is the raw material now used in about 15% of all plastic pipe produced. With the new plant, Naugatuck will be able to triple its Kralastic output.

Tube Turns Plastics, Inc., has been established in Louisville by Tube Turns Div. of National Cylinder Gas Co. and Jackson & Church Co. to manufacture pipe fittings of unplasticized PVC (polyvinyl chloride) by a new patented process. PVC, long considered the dark horse in the plastic pipe race, has been handicapped by a shortage of suitable fittings.

• **Growing Up**—The moves by these well-known companies indicate the metamorphosis now taking place in the industry. The sizable capital investments involved are pretty convincing evidence that plastic pipe is fast approaching the "big business" category and the plastic materials suppliers seem convinced that it will stay there.

For an industry that was born after World War II, that is a tremendous feat. In 1947, Carlon Products Corp. of Cleveland first interested Pittsburgh Consolidation Coal Co. in plastic pipe made from polyethylene film scrap. The capture of the coal mines was an important milestone for plastic pipe, but it never represented a large market. Steel pipe corroded and was left in place when mining operations moved to a new face, so there was a steady replacement market. But polyethylene pipe was rolled up and used over and over again. While long life was a fine selling point, there was no replacement market to use it on.

As late as 1950, according to the Society of the Plastics Industry, only about 5-million lb. of plastics went into pipe. This year 30-million lb. will be used. Sales will top \$25-million.

• **New Entries**—Aside from the obvious growth of markets in the past four years, the base on which the industry is built has been broadened considerably. As late as 1952, perhaps 95% of the plastic pipe produced was made of polyethylene. Now the other plastics are claiming a larger share, and markets are being developed in which their special properties can be used. A major materials supplier ran an intensive survey this summer, found that the materials being used were as follows: polyethylene (Bakelite and du Pont), 60%; Kralastic (U.S. Rubber), 15%; Tenite Butyrate (Eastman Chemical), 15%; miscellaneous, 10% (includes PVC, reinforced, fluorocarbon).

• **More Competition**—Carlon, whose sales of \$6-million represent about a quarter of the industry total, is much more diversified than the average. Polyethylene represents only about 40% of its total business. Carlon is doubtful that polyethylene's share will drop much below the 40% level because of price. There are many new suppliers coming into the field (Monsanto, Allied Chemical, Texas Eastman, National Petro-Chemicals, Spencer Chemical, Dow Chemical). The greatly increased supply plus the competition will probably bring down the price. Some fabricators think that in a year or two polyethylene will be about the cheapest thing you can make a pipe out of.

• **Expanding Markets**—Polyethylene's mass markets have been the farm and the home—for gas and water service. Kralastic has gone after special corrosion markets in paper mills, sewage disposal plants, water-treating plants, and food-handling plants. Tenite's biggest markets have been in the oil and gas fields. Resistoflex Corp. has worked with aircraft hoses made of high-temperature fluorocarbon plastic. But at least two contenders in the race are moving up fast:

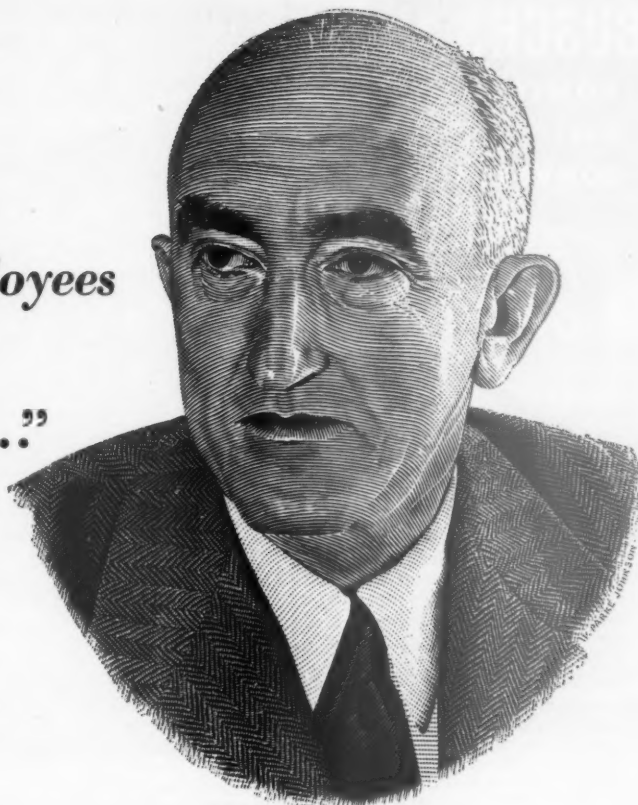
• **PVC** is good for a lot of corrosive-resistant jobs, but it has been held back by difficulties in processing. New methods of pre-plasticizing the material seem to solve one problem, and availability of fittings from Tube Turns another.

• **Reinforced plastic pipe** is eyeing some of the higher-strength applications. If fabricating techniques can be worked out at a reasonable cost, it could provide real competition for metal. As it is now, plastic pipe is a

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that is a high percentage of which Mr. Allen may well be proud. But it is not exactly unique. A number of the 45,000 companies which have the Payroll Savings Plan have 90% participation; many are in the 80% to 90% group, and many more are in the 60%, 70%, 80% class. In every case, these high percentages followed a person-to-person canvass that put a Payroll Savings Application Blank in the hands of every employee.

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competitor only in marginal markets, where pressure is not great or where corrosion is a major headache. At present, metal pipe makers aren't tearing their hair over plastics competition—but then neither were the silk boys when rayon was six years old.

• **Potential**—Another major trend in the plastic pipe industry—perhaps a carryover from the plastics industry in general—is the entry into the field by big-name fabricators. The materials suppliers have always been big, but the fabricators have been small. Most people outside the industry have never heard of the leading makers of plastic pipe (such as Anesite Co., Johnson Plastic Corp., Plastex Pipe & Extrusion Co., Skyline Industries, Yardley Plastics Co.). In all, there are more than 50 companies now in business, and it's hard to determine relative standings.

The big news, however, is that larger companies with money for research and promotion are becoming involved. Continental Can Co., Inc., probably ranks high in the industry's top 10, with the purchase of Mills Plastic Pipe. Minnesota Mining & Mfg. Co. is a potential contender in the reinforced field, along with Youngstown Sheet & Tube Co. Republic Steel Co. has been in the plastic pipe business for some time, and now U.S. Steel is joining. Some observers feel that the entry of these big companies into the field may be partly for insurance, but many feel that their moves are based entirely on a tremendous potential market for plastic pipe.



TV-1964 Style

A picture screen so thin that it could be hung like a painting on the wall—that's how scientists at General Electric visualize home television 10 years from now. Controls would be located in a small box beside your easy chair. The thin-screen concept is emerging from laboratory work on miniature electronic components and radar displays.

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See Clues on page 154

BUSINESS WEEK • Sept. 4, 1954

PRODUCTION BRIEFS



A ceramic coating is being sprayed on the inner side of the rocket tube above to make it withstand both extreme heat and chemical attack. The new coating was developed at the Armour Research Foundation of the Illinois Institute of Technology, Chicago. It differs from conventional coatings, such as porcelain enamel. It is not brittle, and it can be applied to almost any clean solid surface at a few hundred degrees Fahrenheit.

Electronic traffic manager: Houston, Tex., has installed a \$250,000 traffic brain to help prevent jam-ups on all main thoroughfares. Special detectors sample the traffic density every six minutes, send pulsations to a master control panel. The panel regulates the timing of the stop lights. You can now cross town in half the time it used to take.

Private industry has been asked by the Army to bid on the development, engineering design, and construction of a nuclear power reactor that will be built soon at Fort Belvoir, Va. It's the first time competitive bids have been asked on such a project. The plant will be a small-capacity type, similar in operation to the one being built for Duquesne Light Co., near Pittsburgh (BW-Jun. 5 '54,p100).

U.S. Steel Corp. is thinking about titanium. The company may enter the field with a \$30-million plant near Boise, Idaho.

Color TV for just about everybody: 95 cities across the country will receive color telecasts by yearend, says AT&T. Of the 187 stations in these cities, about 125 will be ready to broadcast in color by late December.



Deepfreeze Appliances,
Division of Motor
Products Corporation,
Glazing Contractor:
Waukegan Glass Co.,
Waukegan, Illinois

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FOR
BETTER PRODUCTS**



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Deepfreeze, famous manufacturer of modern appliances for modern living, recognizes the importance of proper factory lighting to boost efficiency and employee morale. "Raw Sunlight" contains many factors that adversely affect your workers and their output. Excess solar heat makes interiors uncomfortable...and blinding glare makes seeing tasks difficult and tiring. This new Deepfreeze plant is glazed with 8000 square feet of Mississippi Coolite, Heat Absorbing, Glare Reducing Glass, which effectively controls the quality of light flooding work areas...banishes objectionable glare...cuts costly eye fatigue that results in seeing errors.

The Coolite in this modern plant is glare reduced on both sides, affording a maximum diffusion of light with a minimum of glare. Workers see better...feel better...work better in better light by Coolite.

If you are planning new construction or modernization, investigate Coolite. See how it can give you increased economy and efficiency. Call your nearby Mississippi Glass distributor today.



Send for free catalog, "Coolite Heat Absorbing and Glare Reducing Glass." Samples on request.

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Selling Opportunity Offered

Manufacturer's Representatives wanted by leading manufacturer of Rust Preventative Coatings for maintenance work; Sell distributors and assist their men in selling industrial accounts. Exclusive territories available. Give full details, territory covered, etc. in first letter. Rust-Sele Company, 9308 Meech, Cleveland 5, Ohio.

Positions Wanted

Western Regional Sales Manager, late 30's, heavy background mechanical equipment, excellent sales record, including national sales experience. Consistent earnings in five figures. Family health makes home in California necessary. PW-3297, Business Week.

Finance-Control: Background in budgeting, planning, controls, management reports, financial public relations (3 years), and investment analysis (3 years). M.B.A. (With Distinction) Harvard Business School. PW-3827, Business Week.

Sales Manager, available soon, industrial goods. Solid mfg. background also. Heavy on training methods, new techniques to lower sales costs. Strong idea man in sales and new products. Complete, rounded experience. Will consider other lines, management position. Age 37. PW-3769, Business Week.

Sales Manager 33 BS Industrial Engineering 9 years experience all phases engineering and selling custom built equipment to widely varied industries, desires position with progressive expanding firm. PW-3786, Business Week.

Electrical Engineer age 36. 15 years design, specifications, surveys and estimates for all types of commercial, industrial and public buildings. Considerable design experience for air-fields, chemical and power plants. Impressive record of projects successfully completed. Capable assuming complete charge. Desires permanent position with AAA firm or will consider short term work on part time free-lance basis. Willing to relocate. PW-3792, Business Week.

Purchasing Executive. Graduate Engineer, broad experience engineering and purchasing, seeks greater opportunity. PW-3801, Business Week.

Professional Pilot desires to contact interested Company or Industry. Have 4 yrs Military 4 1/2 yrs Executive 2 yrs Airline experience on Bonanza and Cessna A.T.R. on DC-3 and C-46. Total of 7200 hrs. age 37. PW-3821, Business Week.

Selling Opportunity Wanted

Illinois sales coverage—Need additional quality lines or technical items, successful 10 year selling record, engineering graduate. RA-3646, Business Week.

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Registered Patent Attorney

Patent Information Book, without obligation. G. Miller, 94BW, Warner Bldg., Wash. 4, D. C.

NEW PRODUCTS



Stitch Pin

The safety pin, which dates back to 7,000 B.C., and its older brother, the straight pin, which held together the furs of paleolithic ladies, have a baby brother—so says William Prym, Inc., major manufacturer of pins and buttons. The company's new product is a simple device that combines features of both conventional types.

Called the Twist Pin, it looks like an attenuated figure eight—a slender bit of wire with an open loop at each end. You insert one of the end points into the fabric with a circular motion of the hand, then take a "stitch" of any length before inserting the other end.

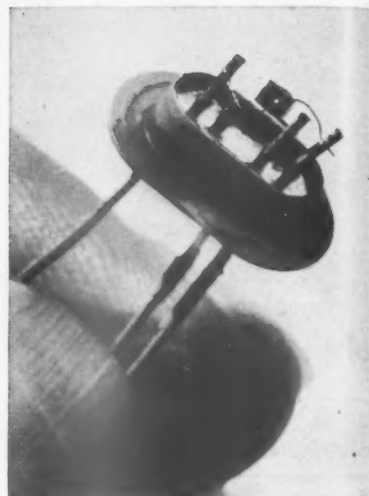
After the stitch is made, the end coils are bent in toward the fabric to lie completely flat. Material is held together neatly and firmly. Ends are bent out to remove. It can be reused many times.

Prym sees a big future for the Twist Pin in quick repairs on something like a broken belt loop, trouser cuff, or sagging lining. Also, it expects a big market in uniforms, where the new pin can serve as an easily detachable shank for special buttons.

For the ladies, there are countless possibilities in adding new frills to a basic wardrobe. A hat, for example, can have fresh flowers on it today, feathers tomorrow, perhaps a veil the next day.

Prym even thinks the Twist Pin will show up on the Christmas tree—as a replacement for the little hooks that suspend the ornaments. The product will be sold nationally in department and variety stores for 25¢ per pack.

• Source: William Prym, Inc., Dayville, Conn.



High-Range Transistor

Bell Labs' newest transistor (above) gets over one hump that has held back earlier types: It can operate at very high frequencies. This means that the electronics industry now has a transistor amplifier that can be used in the ultra high frequency range of FM radio and TV. Up to now, the older vacuum tube had to take over there.

Bell's new transistor will operate at 440-million cycles. And the company says that frequencies of 3,000-million cycles are now within reach.

It can do something else that earlier transistors couldn't: It can operate at relatively high power, perhaps up to one-half a watt. But it doesn't require that much power to operate. As little as a fiftieth of what a flashlight bulb uses is enough.

It is still in the experimental stage, but Bell scientists think it will be used someday to boost the signal in portable radio sets, television receivers, transcontinental radio relay systems, and transoceanic telephone cable repeaters (BW—Aug. 28 '54, p. 50).

• Source: Bell Telephone Laboratories, 463 West St., New York 14, N. Y.

Drying Out the Cellar

About one basement in every three has a problem with water leakage. This week, the Siliphane Corp. of America came out with a product that is said to keep any cellar dry.

The product is called Silitex, S.F. (S.F. stands for silicone formulation.) It is a cement-base powder compound with silicones and some metallic compounds added to it.

The company claims that it is the only cement paint available with sili-

cones in it. Silicones are an important element, because they provide a water-repellent coating, yet permit the structure to breathe.

Silitex, S.F. has been on the industrial market for a couple of years. A number of large water storage tanks have been coated with it. A 25-million gal. water reservoir in Omaha, Neb., has it on floor, walls, and ceiling. Omaha had to keep water from seeping out of this particular reservoir, because the reservoir is underground. One of the city's golf courses runs over its roof.

For the homeowner, the product comes in several colors. The manufacturer says that any do-it-yourselfer can put it on. An average basement—around 800 sq. ft.—can be waterproofed for about \$40.

• Source: Siliphane Corp. of America, 19 East 40th St., New York.

NEW PRODUCT BRIEFS

A new car wash, claimed to go twice as far as competitive brands, was announced last week by Gulf Oil Corp., Pittsburgh. A tablespoonful, mixed with two gallons of water, will wash a car. A 5-oz. package (49¢) will clean 20 of them.

Tough transparent bags: Geveke & Co., 25 Broadway, New York, has introduced a new bag-making machine from Europe that can turn out up to 20,000 bags an hour—from tobacco-pouch types to the kind that department stores use for new white shirts. The company says that it is the only machine that can make hard-to-tear bags with reinforced tops.

GM's new cab-over-engine trucks will be easier for mechanics to maintain. The company's new "Stripaway" system makes it possible to lay bare every important, above-frame part of the engine in 31 sec.—yet, says GM, the new cab is just as safe as an old rigidly fixed cab. The new system is standard equipment on all models from five tons up.

A pair of automatic skeet traps that permit one man to keep five riflemen busy has been announced by the Arms & Ammunition Div. of Olin Mathieson Chemical Corp., 505 Park Ave., New York. A built-in magazine in each trap holds 75 targets. The traps operate from an electric motor. Price per set of two traps: \$995.

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The Next 25 Years

This week Business Week celebrates its twenty-fifth year of publication with a Special Report (page 75) that takes a sweeping look back at the period from 1929 to date—a span that has included a great depression, a total war, and a great boom. They have been furiously exciting, furiously changing years that, as the report makes clear, have literally and figuratively remade America.

Twenty-five years is a comparatively short length of time, yet in this period, Business Week, like many other ventures, has grown and progressed and changed with the change around us.

Our own course has been directly connected with the path blazed by American business in the past quarter-century. And as our report deals with what we experienced over those years, we think it is fitting here to consider what we may expect over the next quarter century.

No one can speak with absolute assurance about the future, but certainly the last 25 years have given us a hint of things to come. For example, the growth of business spending for technological research is likely to produce a whole series of industrial revolutions that will bring vast new changes in industry and social life.

We think it probable that the factory of 1979 will be almost entirely automatic, with machine supervisors replacing the machinist, just as the machinist replaced the hand-craftsman.

This will not mean a displacement of labor. One reason for American progress is that greater production has been matched by greater consumption, and more workers will certainly be needed to increase production. But it will mean greater leisure for more and more people.

We foresee, too, a time when a great many American families will be owning two houses as well as two automobiles. After all, the notion of two chickens in every pot and a car in every garage is no longer fanciful; we can now move on to bigger goals.

We can do so because, by and large, the complacency that accompanied so much of our past success has been replaced by an awareness that however automatic our factories may become, there is nothing automatic about our future course. We have learned, for instance, that government and business must cooperate in order to deal with cyclical swings in the economy.

Out of our experience these past 25 years, we have come to a point where a growing body of authoritative opinion believes that another depression of the 1930-32 magnitude, will never again be permitted to develop. This does not rule out either booms or busts of lesser magnitude. Rather, it brings us face to face with this problem: How can we maintain prosperity in peacetime without risking chronic inflation?

That's one of the big challenges of the future. We are confident that the next twenty-five years will bring changes rivaling those recorded in the files of Business

Week thus far. We are confident, too, those changes will be toward an even better, more prosperous America.

A Living Thing

It may not be so long ago in time, but we have come several millenia up the scale of political evolution since the days when the Townsend Movement flourished, and it appeared that "Thirty Dollars Every Thursday" clubs would sweep the country.

Then, in 1935, Congress established the federal social security system. Its coverage was limited, and its benefits were modest. But it was a good beginning.

In the almost two decades since then, we have seen a tremendous development of private pension programs, many of them—especially those covering wage-earners—carefully integrated with the federal program. And now—again with bipartisan support—Congress has legislated a set of major improvements in social security (page 44). It is a notable achievement of the Administration.

It should effectively deflate the claim, so insistently and repeatedly made by Democratic Party spokesmen for so long, that their party alone was sensitive to the welfare needs of the American people.

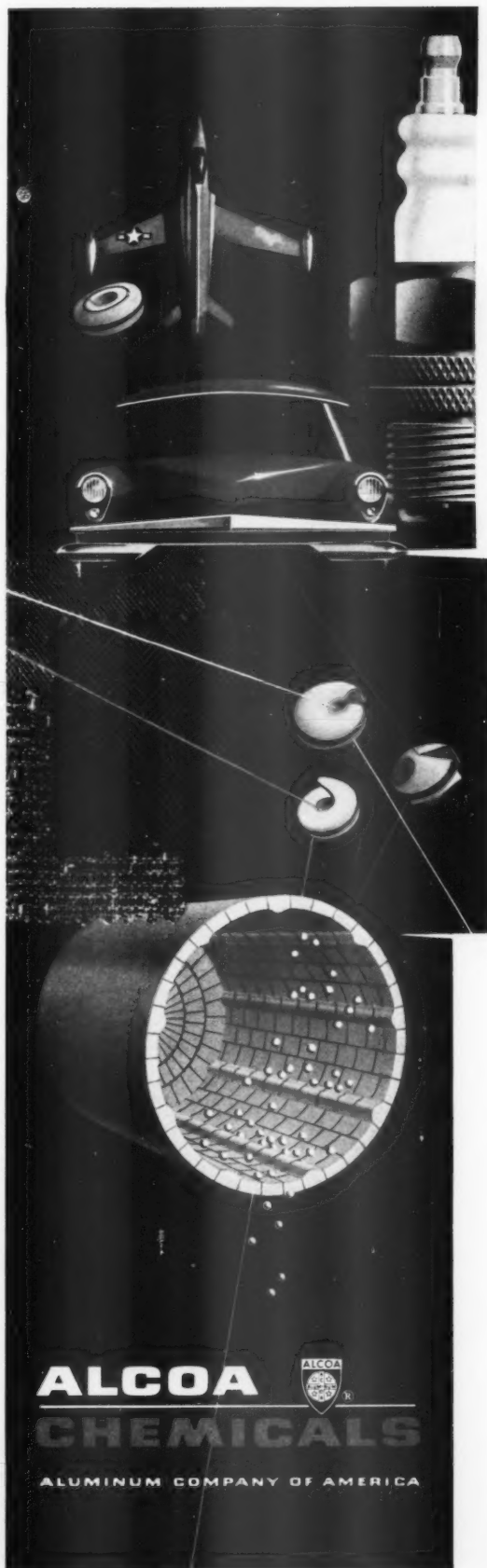
The new legislation should not, however, be a cause for bestowing partisan accolades. Let us take it to mean that there is now a widespread, nonpartisan acceptance of the principle that the federal government's obligation in this field is a living thing; that, within the framework of prudent fiscal policies, increasing the coverage and improving the benefits of social security is an attribute of a healthy and expanding national economy.

The Paper Dragon

The red tape of government paper work is like the Hydra-headed monster of mythology. When one of its heads was lopped off, it promptly sprang up with two new ones as a replacement.

There's no doubt that giant corporations, and many smaller ones, have often been as guilty as federal agencies in allowing paper work and paper workers to multiply so rapidly. But when corporations find their costs due to paper work getting out of hand, they usually take action and lop off some of their staff—at least till the paper starts piling up again. Unfortunately, the government seems perennially snowed under.

Now we hear that the Commission on Organization of the Executive Branch, headed by Herbert Hoover, has decided to wade into the problem. We wish it well and hope that the task force is—to switch mythologies—a veritable St. George who slays the dragon breathing red tape. But we have one request, and that is that the Hoover task force depart from the usual practice of making its recommendations on paper.



Will your industry be
the next changed by

ALCOA ALUMINAS?



YEARS AGO the spark plug business was doing great. Spark plug insulators didn't last long, so if you wanted to keep your car going you kept buying new plugs. Then ceramic engineers discovered that insulators made with ALCOA Alumina lasted longer—*thousands of miles longer*. So long, in fact, that lots of people thought it would ruin the spark plug business. But it didn't. It's bigger business, now, than ever.



NOT SO MANY YEARS AGO, thread guides used in textile plants were made of metal. Tough as they were, they wore out fast, usually in a few hours. Then engineers discovered that *ceramic* thread guides made of ALCOA Alumina lasted longer—*months longer*. It didn't help the metal thread guide business much, but textile makers rejoiced, and now they're buying ceramic guides by the millions.



JUST THIS YEAR, ALCOA Aluminas did it again. Grinding balls and mill linings once were made of iron. They did their job pretty well, but iron contamination of the milled product caused a lot of trouble. Then ceramic linings and grinding media were developed and because there was no more contamination, almost everyone was content. But ceramic engineers weren't. Just this year they announced a new ceramic lining made of ALCOA Alumina that outlasts ordinary ceramic linings by *years*. The manufacturer worried that maybe it was *too good* for the good of his business. But he made it anyway, and now he's selling tons of mill linings.

TOMORROW, your industry may be the next one changed by ALCOA Aluminas. It's quite possible. Ceramic engineers working with ALCOA Aluminas are doing it every day. If you don't know what this remarkable team might do for *your* business, call your nearest ALCOA sales office, or write: ALUMINUM COMPANY OF AMERICA, CHEMICALS DIVISION, 700-J Alcoa Building, Pittsburgh 19, Pa.

Neiman-Marcus

Dallas



Neiman-Marcus, internationally famous Dallas specialty store, uses Burroughs Sensimatic Cycle Billing Machines in its accounts receivable section, and is extremely well pleased with their operation.

John Wanamaker

Philadelphia



John Wanamaker, founded in Philadelphia and famed throughout the world, considers the Burroughs Sensimatic ideally suited to handle its cycle billing of customer accounts. Thousands of regular, budget and revolving credit bills are processed through these machines each month. Sensimatics "produce volume and variety with ease."

THE J. L. HUDSON COMPANY

Detroit



At The J. L. Hudson Company of Detroit, one of America's largest department stores, Burroughs Sensimatics handle all customers' accounts billing. Because of this successful, rapid handling of charge and deferred payment accounts, Hudson's also uses Sensimatics to compute the payroll for its more than 14,000 employees.

Simpson's

TORONTO



The Robert Simpson Company Limited of Toronto, Canada, internationally famous for its slogan "You'll enjoy shopping at Simpson's," says "Our use of Burroughs Sensimatic accounting machines on an efficient customer billing system contributes to greater customer satisfaction."

LEADING DEPARTMENT STORES LOOK TO

BURROUGHS SENSIMATIC

accounting machines

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